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# MEDICAL ASSOCIATION OF GEORGIA

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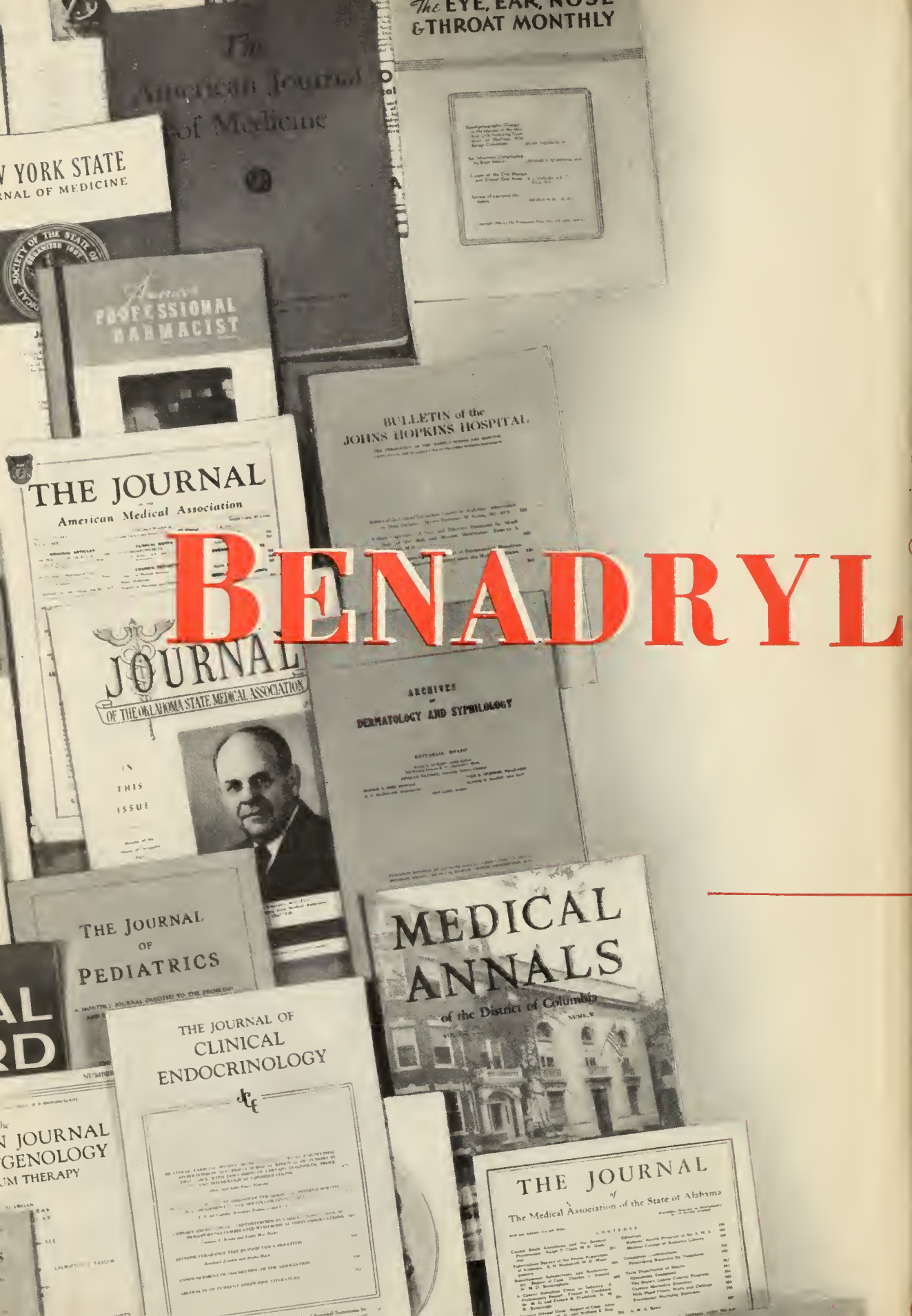
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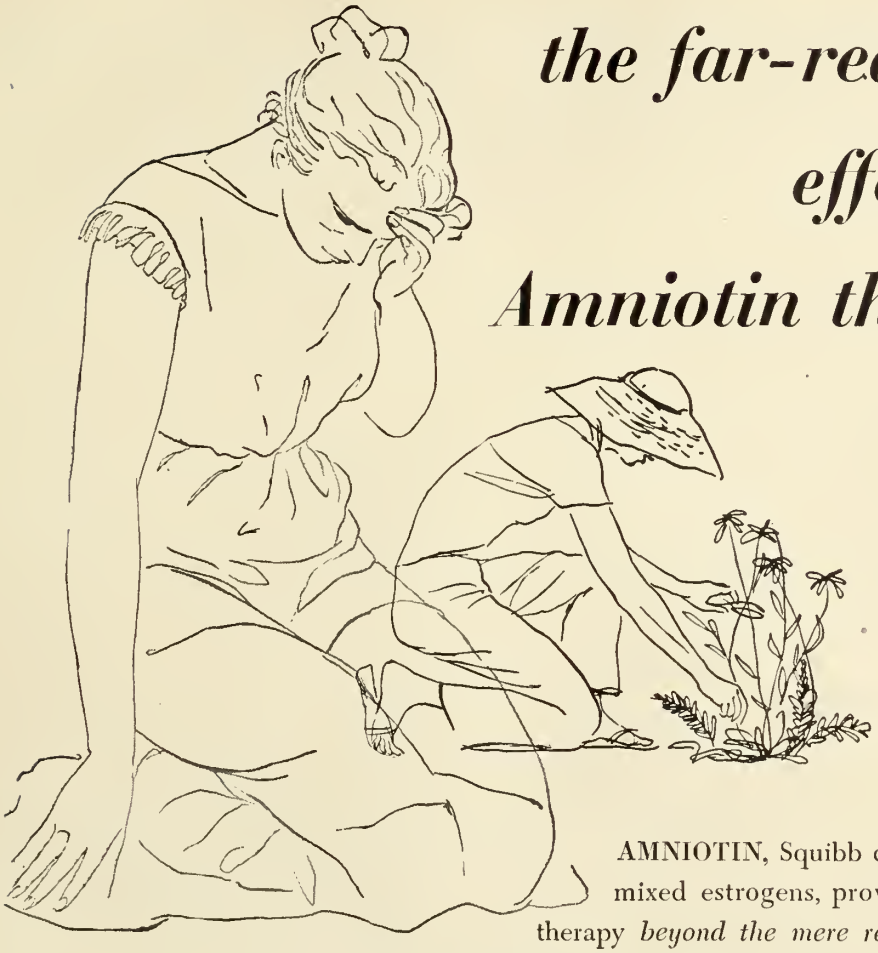
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## SICKLE CELL ANEMIA AND PREGNANCY

*Report of Case*


J. C. Neal, M.D.
V. P. Sydenstricker, M.D.
Richard Torpin, M.D.

*Augusta*


The literature contains a total of 20 cases of sickle cell anemia, the patients being pregnant at the same time their anemia was evident. Seventeen of these were reported by Kobak and his associates in 1940, 11 of which were taken from the literature, and six were their own. Van de Sur recorded one case in 1943; Spivak one in 1945; and Noyes recorded one case in 1946. Our case is reported to add to those in the literature.

N. C., a 21-year-old Negro primigravida, a known case of sickle cell anemia from a sicklemic family, was brought to the attention of the obstetric staff first on Oct. 25, 1946.

The patient was admitted to the hospital on the medical service Oct. 10, 1946, with a diagnosis of sickle cell anemia with hemolytic crisis and pregnancy. When admitted, she was suffering from dyspnea and left shoulder pain of a week's duration and appeared quite ill. She has always lived in Georgia and had six previous admissions for sickle cell anemia since 1933. The original admission was complicated by a streptococcus infection of the throat; another in 1939 by lobar pneumonia and a gonoccocus vaginitis; in 1945, an admission was complicated by an immune state of undulant fever. An admission in February, 1946, was for condylomata accuminata in which sickle cell anemia was incidental. The lesions were removed from the vagina by electrocautery. The patient was treated by whole blood and supportive therapy, as indicated, on all admissions for sickle cell anemia.


From the Department of Medicine, and from the Department of Obstetrics and Gynecology, University of Georgia School of Medicine.



Read before the Medical Association of Georgia, Augusta, April 24, 1947.


The family history revealed that the patient's father died at 46 years of age of a cerebral accident. The mother, at the age of 54, is in good health. Both parents were sicklemic. There were 13 siblings; six died in infancy, and two at the age of 13 years of sickle cell anemia. Five siblings are living; one sister is 24 years old; and four brothers, 17, 23, 25, and 40 years old, respectively. Her grandmother died of cancer.

The menstrual history reveals an onset of menstruation at 13 years of age with a regular 28-day cycle and 4-day flow, using 2-3 pads daily and slight dysmenorrhea the first day. Her last menstrual period was May 30, 1946.

The patient's present illness began some weeks previous to her admission with the stated complaints. She was seen as an out-patient on domiciliary medicine and admitted to the hospital.

On admission to the medical service physical examination revealed an ill-appearing Negro female in some respiratory distress. R.R 36, P.R. 120, B. P. 122/65, T. 99 F. The scleras were markedly icteric; the lungs were clear; the diaphragms bilaterally elevated with the heart enlarged to the left. The left border was between MCL and AAL. A soft systolic murmur was heard over the whole precordium, more marked over the mitral area. The abdomen was distended with pregnancy.

The laboratory report on admission revealed R.B.C. of 2,160,000; Hb. 5.5 Gm., immediate sickling, a positive Kahn; amber urine; the P.S.P. test was so colored with pigment as to make determination impossible. The color index 0.81, Hematocrit 20, volume index 0.98, mean corpscular volume 92.5.

An x-ray report of a single plate of the chest on Oct. 10, 1946 showed "The chest essentially normal except for enlarged heart. The transverse diameter of 14 cm.; intrathoracic diameter 23 cm., with a slight increase in the bronchiovascular markings radiating from both regions. This is in keeping with cardiac enlargement and passive congestion of the lungs."

The patient was given supportive therapy on admission consisting of a regular diet, sodium nicotinate, morphine sulfate, and nasal oxygen followed by three 500 cc. transfusions of blood on alternate days. Nasal $O_2$ and morphine sulfate were discontinued after the first transfusion. She improved rapidly; in a week her P.R. 104, R.R. 23, the systolic murmur over the precordium was considerably reduced, the dyspnea disappeared, and icteric sclera were clearing. The R.B.C. was 3,020,000.

An electrocardiograph report revealed "An abnormal record showing a sinus tachycardia and nonspecific T wave and ST segment changes. In view of the clinical picture, these were probably due to severe anemia, particularly since patient was under 30 years of age."

The patient's recovery progressed well with two more blood transfusions. She was seen by the obstetric service on Oct. 29, 1946 and a diagnosis of six to seven months pregnancy was confirmed. The patient was given two more transfusions and serologic tests were repeated. Two negative Kahns were reported, the patient's symptoms disappeared, and she was dismissed on Nov. 27, 1946, and told to report back to OB clinic. At time of dismissal, she had some 8 Gm. Hb. and R.B.C. of 3,500,000. She was dismissed due to the fact that no more donors were available at the time and her general condition seemed good.

She did not report back to the OB clinic for one

month—until Dec. 19, 1946, at which time she stated she had been too ill to attend the clinic. She had a hemoglobin of 6.5 Gm. and was admitted to the OB service for supportive therapy.

On admission, the patient's heart enlargement to the left, with a soft systolic murmur over the whole precordium, was still present, the abdomen was distended with an intrauterine pregnancy. The height of the fundus was 30 cm.; the F.H.R. 148 with an LOP position. The head was floating. She was given 500 cc. of whole blood the next day and some 8 to 10 hours after completion of the transfusion appeared to be in cardiac distress with a R.R. 50, P.R. 104, B.P. 150/100, T. 99 F. She complained of abdominal pain and on examination was found to have uterine contractions every 10 to 15 minutes, lasting 10 to 20 seconds, with the head still floating.

She was given cedalanid for rapid digitalization, nasal oxygen, and morphine sulfate gr. 1/8 for supportive therapy. The patient's pains disappeared. She was given digitalis daily. A pelvic measurement was taken revealing a pelvis of 10.3 cm. by 10.8 cm. The next day the patient was much improved—P.R. 100; R.R. 22; T. 99; B.P. 130/90. F.H.R. 130-140, and head was still floating and she had no uterine contractions. She developed a slight icterus of her sclera, but her general condition markedly improved. Two days later nasal oxygen was discontinued—P.R. 100; R.R. 22; T. 99; B.P. 130/90. The same day the patient's membranes ruptured and uterine contractions began irregularly with infrequent pains of variable duration. A lateral x-ray study of the abdomen showed "Small, term fetus, cephalic presentation, head in lateral position, occiput to left, the placenta on the posterior uterine wall".

Her pains gradually increased in character and frequency and some 24 hours later the patient's pains were occurring 5 to 8 minutes apart and lasting 40 to 50 seconds. A rectal examination revealed the patient to be 5 cm. dilated and 50 per cent effaced, with the fetal head at the ischial spines. She was quite uncomfortable and was given 75 mg. of demerol and 1/150 gr. of hyoscine intramuscularly. Her pains continued to be regular and of about the same frequency and character with slow progress. A rectal in two hours revealed 80 per cent effacement and 6 cm. dilation, with the head about 1 cm. below ischial spines. Five hours later she was given demerol 50 mg. and hyoscine 1/200 gr. Following this her pains diminished somewhat gradually in frequency. The patient was given 250 cc. whole blood transfusion and some six hours later the pains began occurring with increasing regularity again. A rectal examination revealed the cervix 90 per cent effaced, 7 cm. dilated and the fetal head 2 cm. below the spines. Her pains gradually increased in character and frequency until they were occurring every three minutes and lasting a full minute. An hour later the patient was given nembutal gr. 3 3/4 and hyoscine gr. 1/100 intravenously. Labor progressed slowly but steadily. A normal female infant weighing 6 pounds was delivered from LOA position following left mesiolateral episiotomy. The infant breathed and cried spontaneously 39 hours after the beginning of the first stage of labor. The placenta delivered some five minutes later from the posterior uterine wall by Crede method with a Duncan separation. The episiotomy was repaired under cyclopropane anesthesia with a continuous four layer suture of chromic catgut. The estimated total blood loss was 75 cc. The condition of both mother and child was good.

Two ampules of ergonovine were given at the completion of the third stage of labor. The postpartum course was uncomplicated. The patient received a 500 cc. transfusion of whole blood the third day postpartum and was dismissed on the eighth postpartum day with a R.B.C. 3,820,000 and Hb. of 10.6 Gm.

**The Medical Association of Georgia will hold its next annual session in Atlanta, April 27-30, 1948.**

# SOME OBSERVATIONS ON PRISON PSYCHOSES

MARION M. ESTES, M.D.
JAMES S. NEW, M.D.

*Augusta*

Prison psychosis is an interesting and fairly unusual type of disorder which is dependent upon and precipitated by confinement. In a way the prison psychosis is closely related to conversion hysteria, in that it serves as a direct escape from an otherwise painful and perplexing situation. The controlled conditions under which prison psychosis develops stimulate one's curiosity as to why this form of escape should not be more generally utilized. This does not imply that prison psychosis is the only personality derangement that occurs in confinement. Actually it is not the most common form of nervous and mental disorder seen in prison. Weiss found only 50 cases of prison psychosis out of a series of 8,000 military prisoners[1]. This figure is in general agreement with other series[2]. Much more often are noted malingering, anxieties, depressions, conversion phenomena and, in the instance of long-termers, deterioration. Malingering is evasion of a painful reality at a non-reality level and must be considered a personality disorder. A malingerer who will resort to such drastic measures as cutting his Achilles' tendon to avoid unpleasant associations with other overbearing inmates and distasteful duties presents *prima facie* evidence of some breakdown in well integrated personality functioning.

There are several features of the prison phychosis which differentiates it from other

From the Department of Neuropsychiatry, University of Georgia School of Medicine.
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Read before the Medical Association of Georgia, Augusta, April 24, 1947.

psychotic states and give it uniqueness. The precipitating conditions are seen so clearly in practically no other psychosis. The onset is acute. The superficial character of the prison psychosis is manifested both by the very useful purpose it serves, and its ready amenability to superfiicial therapy —mainly removal from the unpleasant situation. The clinical symptoms are characteristically bizarre.

One manifestation of the prison psychosis has attracted special consideration. This is the Ganser syndrome. The Ganser syndrome—or the syndrome of approximate answers—appears fairly early in the disorder and, in prisoners awaiting trial, may be interpreted by the unwary as malingering. We know of one instance in which this syndrome occurred in a man awaiting Selective Service classification. The syndrome consists of incorrect answers to questions, the error often being slight or relatively slight. When the prisoner is asked, for example, the product of 5 times 4 he will answer 21; or asked the sum of 2 and 2 will state 5, etc. One instance in which the Ganser syndrome was incorporated so thoroughly in the unconscious became evident on routine neurologic examination. The patient would see 3 fingers when 2 were held up, or would see 4 when 5 were held up. Also, in testing the position sense this latter prisoner indicated a position exactly opposite the true movement of the great toe which was being manipulated. The significance of the Ganser syndrome seems to be that the prisoner's total personality is unconsciously setting about to prove to the psychiatrist that the culprit is *not guilty*, by reason of insanity. Actually its presence usually substantiates guilt. In our experience the Ganser syndrome most commonly occurs in the suggestible, borderline or low-normal intelligence group, a group which constitutes a large number of any criminal population.

The clinical symptomatology of the prison psychosis is bizarre and variable, but usually its acute onset, episodes of confusion, episodes of excitement and depression, auditory and visual hallucinations, intellectual scattering and deterioration, emotional superficiality and flattening, and often the Ganser syndrome, are sufficiently regular to lend the psychosis a homogenous nature. By the standards of the psychodiagnostic tests it appears as an acute schizophrenic episode.

The onset of the acute psychotic episode usually occurs fairly shortly after confinement. Although it frequently develops during confinement while awaiting trial, it is occasionally seen after years of confinement, even a few weeks before release. Either of these extremes speaks for the influence of factors other than confinement itself in the production of the prison psychosis.

There are many factors which influence the development of the psychotic breakdown. Perhaps the most obvious is confinement itself. It may be presumptuous to say that had the person not been confined prison psychosis would not have developed in him. It is clearly conceivable that even in fairly unrestricted civilian life an otherwise "normal" personality can be and often is subjected to a situation containing enough emotional conflict to cause an acute psychotic reaction. The influence of the "normal" man's attitude toward confinement must be considered. He is being placed in a situation purposely unpleasant, deprived of most of the comforts for which he has striven. In many instances it is a new and unknown experience, one in which he does not know what to expect. Deep-seated feelings of guilt are awakened and, because of infantile memories, the prisoner either consciously or unconsciously associates physical pain with punishment. This

factor may lead him to overlook the fact that the confinement itself is punishment. Furthermore, he expects some form of physical punishment. There is also the factor of loss of prestige, even love, from his friends and family. Situational factors, in the prisoner's home or his family, may leave him to feel helpless and ineffectual. Sexual conflict arises from enforced abstinence from normal heterosexual experience, which is replaced by less desirable and even disturbing forms of sexuality such as homosexuality and masturbation. For all of this bitter reality there is substituted pleasurable fantasy. The more unpleasant the reality the easier it is to accept the unreality which assumes the form of a psychotic episode. Thus it is not only conceivable that an acute psychotic reaction can occur in a "normal" personality in such circumstances, but surprising that it does not occur more often.

Add to the above process of development the large proportion of personality deviates who are by the very nature of their antisocial behavior seen in a prison population, and it is easily seen that many types of minor personality disorders may blossom forth into major or total (holergasic) reactions. The schizoid personality, the mental defective, the homosexual, either latent or overt, the psychopathic personality and personalities with paranoid trends who have been able to make some sort of adjustment to unrestricted private life are all now in a situation with new and demanding requirements, which may prove too much for a smoothly-functioning personality.

From a series of cases in a Service Command Rehabilitation Center, previously reported by Dr. Isidore I. Weiss, one of us was privileged to see several of these rather unusual cases while a ward officer in a nearby General Hospital to which these men were evacuated for definitive treatment.

## REPORT OF CASES

*Case* 1. A 32-year-old soldier of limited educational and social background, with no previous evidence of maladjustment, was confined because of unauthorized absence. The initial interview with the psychiatrist at the Rehabilitation Center revealed no conspicuous personality deviation. This man's trouble was brought to the attention of the psychiatrist at the Rehabilitation Center when he was found to show considerable confusion, retardation, blocking and inability to carry on with his normal routine. Upon closer examination he stated that other men in the enclosure accused him of "walking like a woman" and being homosexual. He also demonstrated the Ganser syndrome of approximate answers. As is usually true, the patient showed prompt improvement merely upon being transferred to a hospital atmosphere where privileges and creature comforts were less limited. After a few electro-shock treatments he was bright and cheerful, took part in the ward routines and occupational therapy, ate well and slept well, until it was felt that he could be returned to confinement. On the day of return the patient refused to leave the hospital ward and was sent back only under duress. An interesting commentary is that he was seen again on the hospital wards after a few weeks of remission. This time he was in a state of stupor with catatonic attitudinization. Again he responded to electric shock therapy in short order. He was transferred to another disciplinary barracks and so was thereafter lost to our observation.

*Case* 2. A 19-year-old soldier was confined by General Court Martial for larceny and unauthorized absence. The previous history was negative for clearly defined personality disorder, but the initial psychiatric interview revealed an immature emotional reaction and a tendency to somatize. No neuropsychiatric diagnosis was made. During confinement he seemed unable to adjust to routines, was frequently on the sick list, exhibited much anxiety, self-pity and almost demanded special favors. Numerous infractions of the rules caused him to be placed in solitary confinement, where he again came to the attention of the Rehabilitation Center psychiatrist. In what seemed to be rage he tore a plank from the wall and held guards at bay by promising to kill any man who crossed the threshold. The psychiatrist was summoned and found the man to be reacting violently to auditory hallucinations. On admission to the hospital ward he showed confusion, agitated denression, weeping, despair, auditory hallucinations and bizarre somatic complaints, particularly complaints referable to the heart. On routine ward care he responded well and, after a few electro-shock treatments, made a good adjustment. After the confusion resulting from the treatment wore off he was bright, cheerful, hopeful and was returned to the disciplinary center.

*Case* 3. This is reported from a state prison. A 32-year-old male, while confined in a state prison awaiting the electric chair, began to show behavior that was at first regarded by the personnel as simple malingering. During the trial, in which he was convicted of the murder of two men, he had shown no signs of mental disorder. Approximately a month after his transfer to the state prison, where he realized execution awaited him, he began, as the guards expressed it, to "play crazy". He was found nearly always sitting hunched in a corner of his cell, mumbling, or at the door repeating some irrelevant request. He made no pertinent reply to questions and nothing he said would indicate that he knew where he was or what awaited him. This pattern of behavior persisted for weeks and, even when efforts to observe him without his knowledge were carried out, no distinct or noteworthy change was noted.

On examination this prisoner did not show anything that suggested a psychosis in the ordinary sense. He lacked the specific mannerisms, the tendency to attitudinize, the hollow or brittle expressions that are

characteristic of schizophrenia. He took his place in a chair, kept his head bowed much of the time, turned from one physician to another and said scores of times, "Gimme somethin' for my head".

When asked if his head hurt, if he wanted to go home, if he had killed the men of whose murder he had been accused, if he knew where he was, he merely repeated his request. In many responses he gave the impression of a man playing a part, an impression which schizophrenic and other patients with ordinary psychoses so rarely give. The degree of confusion and disorientation which his words and conduct implied were inconsistent with the lack of other signs which distinguish the various psychoses. Now and then he would extend a piece of tobacco in his hand, saying "Don't you want a chew", his tone plaintive and coaxing. He repeatedly put a hand on the back of his head as he asked for "somethin' for my head".

Twelve grains of sodium amytal were given intravenously and a remarkable change occurred. He became well oriented, spoke of his past life and answered questions about the crimes for which he had been convicted. No sign of the apparent confusion remained and all the repetitious speech and behavior disappeared. He consistently denied having harmed anyone and maintained that he had no memory of the shooting or of the trial. It was pointed out to him that at least a dozen people had seen him kill the two men and that at the trial he had been clear and rational. This had no effect on his stubborn denial.

This man was seen again a month after the latter view, under narcosis. He had relapsed to his previous pattern of behavior within twelve hours after receiving the drug, and this had been maintained.

In such a case diagnosis is difficult. According to the laws of the state, a man who becomes psychotic cannot be executed until he recovers from the psychosis. A strong motive is therefore present for simulation, in addition to the direct stress of confinement with the electric chair ahead. The type of behavior suggested definitely a simple person's concept of how a "crazy man" should act, yet the persistence and consistency of the behavior make one question the hypothesis of simple pretence. The notable change with amytal and the almost total disappearance of the long established pattern of conduct might be used in behalf of an argument that this man was malingering. On the other hand, it is well known that many genuine cases of catatonic schizophrenia temporarily clear up on the administration of amytal intravenously. The observer cannot but wonder if this man, under the obvious stress of his situation, began consciously to pretend a mental disorder, and if this pretense did not in time become a real disorder, the prisoner losing insight and becoming engulfed so as to speak in what had at first been voluntarily assumed.

## *Summary*

Prison psychosis is a definite nosologic entity which occurs in the specific situation of confinement. The chief characteristics of this disorder are its acute onset, confusion, episodes of excitement and depression, auditory and visual hallucinations, emotional deterioration and occasionally the Ganser syndrome of approximate answers. Although the psychotic episode is bizarre, it is fairly superficial in the level of personality functioning. Strangely, this psychosis occurs rather infrequently.

There are many factors which contribute to the development of a prison psychosis. Confinement, however, is the precipitating factor.

Obviously there is strong motivation for the development of a psychotic reaction as a manner of escaping an unpleasant reality. In this aspect, the dynamics of the prison psychosis are similar to those of conversion hysteria.

Adequate treatment may be considered in two phases: First, treatment of the acute psychotic episode which usually responds well if one simply removes the patient from the prison. Electro-shock has been beneficial in this first phase. The second phase, establishment of true emotional insight into the cause or cases is somewhat more difficult to manage. Because of the difficulty in establishment of insight, there is a tendency to recurrence.

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## MORE CANCERS FOUND AT DETECTION CENTERS THAN EXPECTED

A nine-months' survey of cancer detection centers in one state shows that 10 to 15 times as many cancers are being discovered in male examinees, and twice as many in females, as would be expected from the general cancer prevalence rates by sex and age. These facts are revealed in a report by Howard W. Jones, Jr., M.D., and W. Ross Cameron, M.D., Baltimore, in the December 13 issue of *The Journal of the American Medical Association.*

The two doctors state that from November 1, 1946 to July 31, 1947 a total of 1,709 persons were examined in cancer detection centers in Maryland, 336 being men and 1,373 women. By means of the expected prevalence and detectability rates only 0.56 cases of cancer would have been anticipated in the male and 4.9 cases in the female examinees. Actually eight cancers were found among the men and nine among the women.

Although a cancer detection center represents a case-finding clinic to which only persons who are free from cancer symptoms are supposed to be admitted for examination, the writers suggest that a high proportion of the patients come to such centers because of minor complaints or because of the occurrence of cancer in their immediate families. They are therefore not a true cross section of the population as a whole.

"An incidental, but important finding," the doctors also write, "was that 36 per cent of men and 51 per cent of women examinees were referred to their physician because medical or surgical conditions other than cancer were discovered."

# NARCOHYPNOSIS IN MEDICAL PRACTICE

HARRY R. LIPTON, M.D.
JAMES K. FANCHER, M.D.

*Atlanta*

Narcohypnosis is a select method of therapy for treating certain psychosomatic disorders. It has been found to be especially valuable in the treatment of psychoneuroses of a hysterical or psychasthenic type, amnesic episodes, selected anxiety states, migraine, stuttering, psychosexual impotence, frigidity, and certain neurologic conditions.

A workable knowledge of psychodynamics and psychopathology is necessary for this therapy. Only patients having fairly well-integrated personality structures are selected. Schizoid personalities, mental defectives, and severe psychoneurotics with depression are not suitable for this type of therapy. The nature and purpose of the treatment is discussed with the patient.

## *Method*

The evening is the ideal time. Supper is withheld. The lights in the room are dimmed and the patient is asked to assume a comfortable position in bed. A state of mild narcosis is induced by the slow injection of 2.5 per cent sodium pentothal solution. The minimum quantity is used. The patient should be able to hear all that is said to him and to answer clearly. Thickness of speech or excessive drowsiness calls for cessation of the drug until the patient shows a tendency to awaken. A hypnotic state is easily induced by suggestion.

The physician repeats with confidence suggestions for relaxation and sleep as follows: "I am going to help you relax completely. What I do may cause you to become drowsy yet you will remain wide awake. In the relaxed state, I will speak to your subconscious mind. You may not recall what was discussed during this treatment, but you will nevertheless derive full benefit. Following this treatment you will sleep soundly. Although you will be asleep you will be sensitized to my voice and you will hear in your subconcsious everything I say. You will awaken in the morning feeling refreshed, relaxed and clear of mind and free of your functional disturbance.

"Now fix your gaze upon the ceiling. Relax your entire body, particularly your muscles. Breathe calmly, rhythmically, evenly and deeply. As this medicine is flowing into your veins, you are experiencing an agreeable warm, heavy feeling, pervading your entire body. You are becoming more and more relaxed. Your eyelids are becoming heavy. They will become progressively more heavy. As they want to close let them close."

The specific suggestions given to the patient should be acceptable to him in the fully conscious state. Their nature should be discussed with him beforehand. The exact suggestions are carefully worded throughout the therapeutic session, and only constructive suggestions are given. The patient is given insight into the psychodynamics of his particular symptom formation. In the narcohypnotic state he is able to assimilate these on an emotional level. The suggestions are aimed at the underlying attitude rather than at the symptoms. The patient is advised that if he will believe and think correctly, he will act correctly and feel correctly. At the end of the therapeutic period an additional amount of sodium pentothal is administered with suggestions of sleep until sleep is induced.

Read before the Medical Association of Georgia, Augusta, April 24, 1947.



Figure 1
Contracture and atrophy of left leg and ankylosis of left ankle in an individual whose feelings were insecure, who was self-conscious and who lacked drive and continuity of purpose. Note also Figure 2.

This method of therapy overcomes the resistances and defenses of the patient, establishing a physician-patient relationship of trust and security. The patient is helped to take a more objective view of himself and to control and direct his own thinking. He is also given an understanding of the origin of his symptoms as linked up with his life experiences. The patient is helped relive emotionally traumatic experiences. and work off the emotions bottled up with them.

No untoward effects from this therapy have been encountered. In the treatment of chronic neurologic conditions one must be very careful in selection. Patients over forty years of age, or patients who have been bedridden for a long period of time, should not be treated by this type of therapy. The almost superhuman effort exerted by these patients to initiate or increase function might easily lead to a cardiovascular accident.

One should be familiar with the contraindications to the use of sodium pentothal, such as history of asthma, and cardiac or pulmonary disease. It is advisable to have stimulants on hand for injection.

## REPORT OF CASES

A white female, aged 33, was the oldest of two siblings from a middle class family. She attended high school until 19 and married shortly thereafter. Her married life was very unhappy as her husband was inconsiderate, had a violent uncontrollable temper, and frequently abused her physically and verbally.

Her present illness began when she was 27, with an

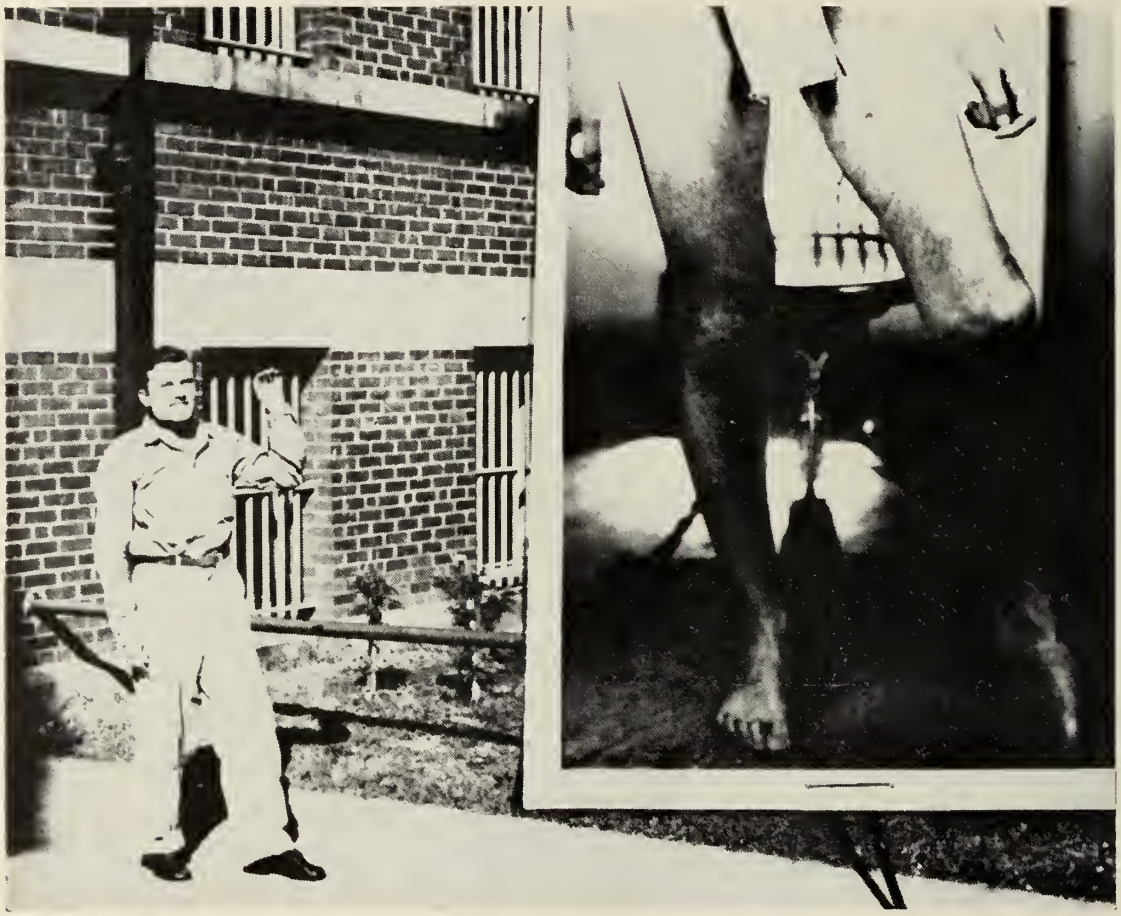


**Figure 2**
**Same patient as shown in Figure 1. Note apparent improvement after treatment by narcohypnosis and other appropriate measures.**

attack of anxiety. Her husband was then first admitted to a private psychiatric hospital for treatment for manic-depressive psychosis. She had a severe panic state at thirty-one years of age, when her husband attempted to force her to perform fellatio. She ran out of the house nude and hid in some bushes some distance away for several hours. She re-experienced this situation in a dream two months later while visiting friends in another city. She screamed and ran from her bedroom to the living room of the house before she could be awakened.

She was first seen by one of us two months later. She had, at the time, been on a reducing diet, which she had attempted to improve upon herself. Her mood was characterized by moderate anxiety and depression. She complained of weakness, difficulty in concentrating, and inability to make up her mind. The thought content was depressive in nature. Feelings of shame and guilt were prominent. She stated she had lost her own self-respect, the respect for her family, and all interests. She expressed a lack of desire to carry on and an aversion to going back to her husband and previous life.

She was treated by narcohypnosis, the day after initial interview. She was helped relive the sexual assault and work off some of the emotion associated with it. It was suggested to her that henceforth she would do what she felt like doing and that she would have no shame thereover; also that she would regain her self-respect and respect for her family; that the therapy was laying the groundwork for her enjoying life as previously.

This patient is of good heredity. Her school progress and business ability are indicative of superior intellectual capacity. Prior to her illness she was energetic, optimistic and well-balanced emotionally. It is likely that dieting not according to medical directions, and the loss of considerable weight over a short period of time, played some part in her illness. She was considered to be suffering from a psychoneurosis, mixed type, with hysterical and psychasthenic elements.

She has had no return of panic states since treatment two years ago. She becomes mildly depressed and obsessed with vague fears at intervals. As a whole, there has been marked improvement in her condition. Her personal adjustment has been good and there has been great improvement in her relations with her husband.

A white male, aged 25, was the oldest of two siblings; he has a sister two years his junior. His father died at 41, of coronary thrombosis, when the patient was 4 years old. His mother is living and in good health. He was reared in a small, Southern town, where he completed high school. Thereafter, he attended a school of technology and obtained a degree as a textile engineer. At 23 he married a girl one year his junior, after an acquaintanceship of three years.

He was reared very religiously. He was taught that drinking was wrong, and was discouraged regarding smoking. He never smoked until a year after his marriage. He now takes only an occasional drink.

He was taught that anything having to do with sex was sinful. Neither his mother, sister, or he closed the doors of their rooms when dressing or undressing. His mother later told him she did this so that sight of the female body would not stimulate him. He received no sex instruction as a boy and young man.

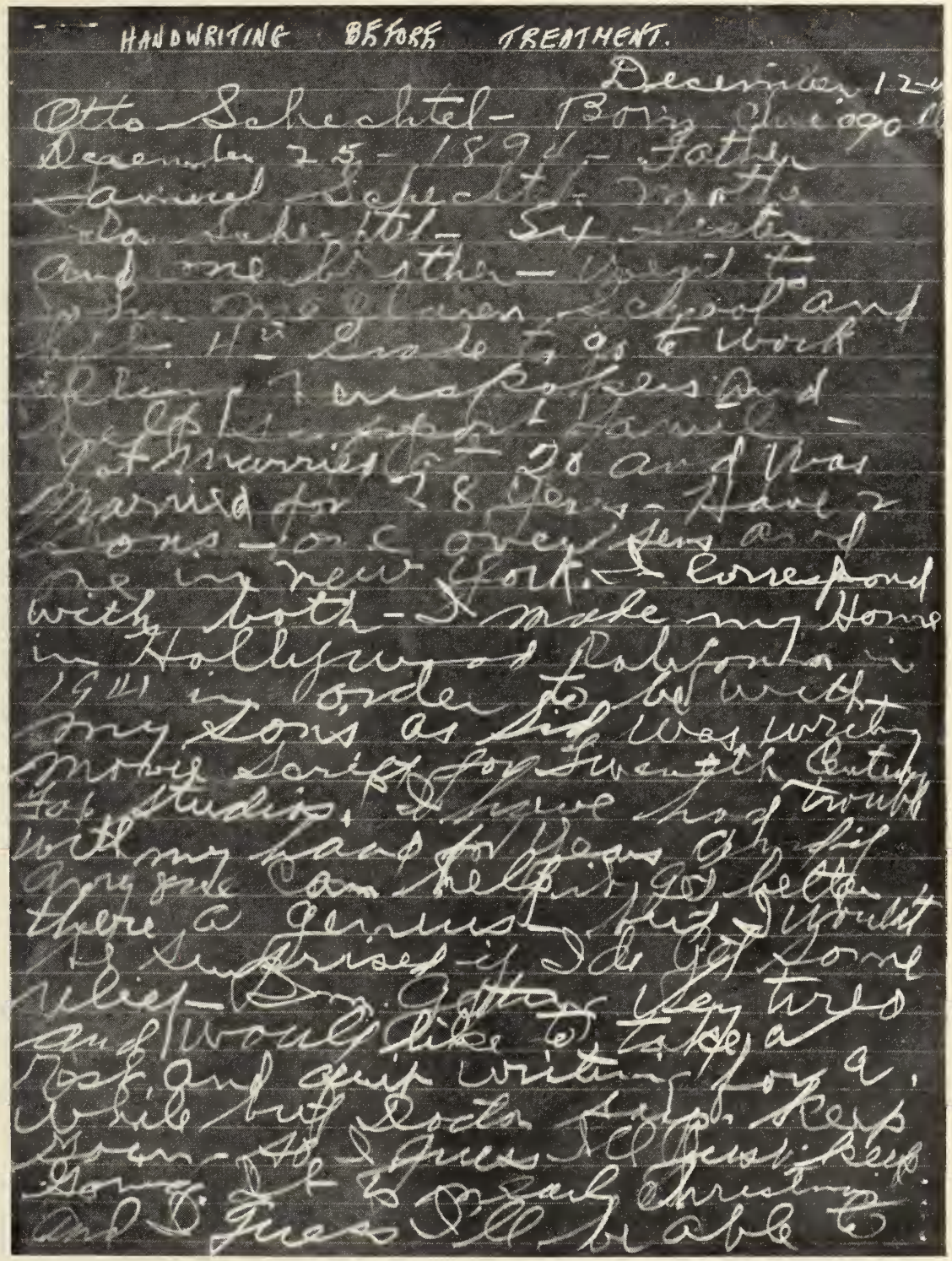
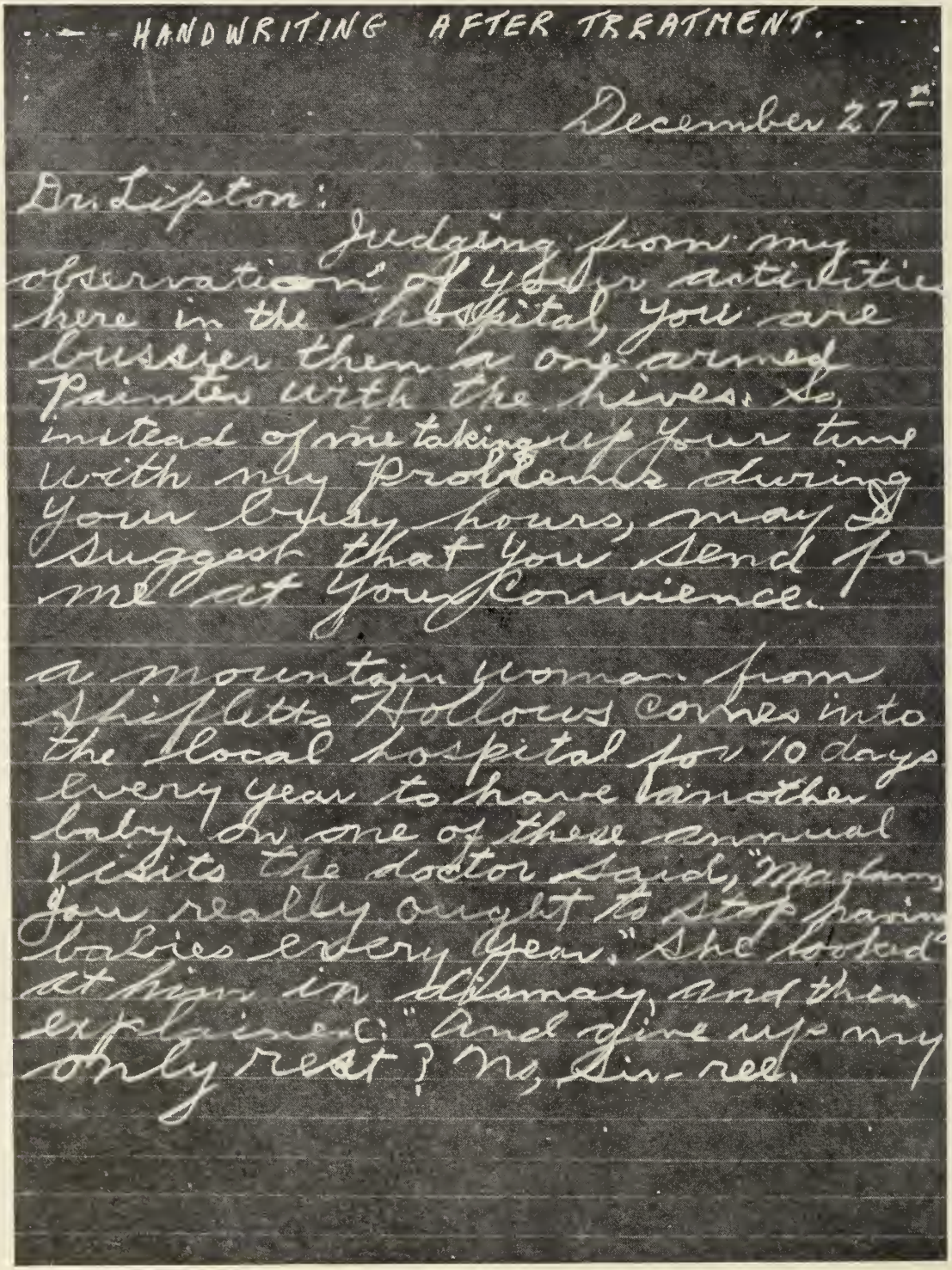



**Figure 3**
**Handwriting, before treatment, of a patient with hysterical spasm of an upper extremity. Note also Figure 4.**

Prior to marriage he had never masturbated or had any sex experience. He recalls his mother once making the remark to his wife, "It is a shame children have to be born through sex, they are so beautiful." During his year and a half of married life he had had frequent sexual failures which drove him almost to distraction. He had difficulty with erections, and frequently left his wife keyed-up and without relief. The condition began with premature ejaculations. He complained that his sexual failures of late discouraged both his wife and himself from even trying to have intercourse. A thorough physical and endocrine examination showed him to be normal.

It was apparent that his psychosexual impotence was the result of inhibition by his mother during his boyhood and a subconscious fear of punishment for engaging in something he had been taught to believe was sinful. He was treated by narcohypnosis the next


HANDWRITING AFTER TREATMENT.

December 27th.

Dr. Lipton:

Judging from my observation of your activities here in the Hospital, you are busier than a one armed Painter with the hives. So, instead of me taking up your time with my problems during your busy hours, may I suggest that you send for me at your convience.

A mountain woman from Whitetop Hollows comes into the local hospital for 10 days every year to have another baby. On one of these annual visits the doctor said, "Maybum, you really ought to stop having babies every year." She looked at him in dismay and then explained: "And give up my only rest? No, Sir-ree.

**Figure 4**
**Handwriting, after treatment, of patient with hysterical spasm of an upper extremity. Note improvement over that shown in Figure 3.**

day. The following suggestions were given:

"Your poor erections are the result of psychologic inhibition in the past and will be corrected by the psychologic stimulus you are now receiving. The sex act is pleasurable, beautiful, romantic and esthetic. Sex is a natural function and as necessary in your life as eating and sleeping. You are sexually adequate. Your condition is not organic. That is a medical fact.

"You will go to bed nightly with thoughts of your wife and you will fall asleep with thoughts of her on your mind. You will frequently dream of intercourse with your wife and you will have emissions during some of these dreams. Henceforth, after caressing and properly arousing your wife, you will have a firm erection which you will be able to hold for a reasonable length of time, and you will give and you will obtain full pleasure from the sexual act."

The following is quoted from a letter received the following year: "I want to thank you for all you did for me and my wife. The trouble which heretofore was wrecking our lives has been completely apart from us since your treatment. We both feel that for the first time in our lives we are enjoying a normal life together."

It has been two years since therapy. His sexual adjustment remains good.

A white female, aged 47, is of good heredity. Both parents, however, came from disrupted homes, and suffered emotional deprivations in their early lives. Her mother, apparently, compensated well. Her father, on the other hand, displayed his emotional deprivations and was excitable and at times arbitrary and vehement in his discipline.

She is of above average intellectual capacity. She has always been of a sensitive feeling personality type, with high ideals. As a child she was nervous and given to cry easily. She was raised puritanically without knowledge of proper sex hygiene. She grew up on the family farm and attended school through the twelfth grade. She married at 25 years of age. She knew that her husband drank, but hoped to reform him after marriage. Her present illness began at 34 years of age. She was, at that time, nervous and depressed over her husband's drinking, and contemplated leaving him. The death of her husband, six years ago, by asphyxiation, served to activate subconscious guilt feelings. The amputation of her right breast soon after his death was both a physical and psychic traumatic experience. She was considered to be suffering from a psychoneurosis of a psychasthenic type.

She was treated by narcohypnosis six months ago. Her adjustment since has been good, and on a much higher level.

A white male, aged 32, is the second of five living siblings. Two brothers and one sister are deceased. His father and one brother were killed in a gun battle seven years ago. His mother died six years ago of pellagra and other ailments. He was reared on a farm under moderate economic circumstances. He left school while in the fifth grade to help with work on the farm. He married in 1938 a girl eleven years his junior whom he had known since childhood. They have two small children. During the past twelve years he has been arrested on five occasions for violation of liquor laws and has served sentences totaling approximately three years.

He sustained a gunshot wound of the left thigh twelve years ago when an attempt was made on his life. He experienced little pain and was up the next day on crutches. He noticed that his left leg was numb and that he was unable to use the same. His physician advised him that feeling would return to the leg after eight years; strangely enough this occurred. Five years ago he noticed a tingling in the extremity and himself began massage and passive motion. Thereafter he gained considerable movement in the extremity and it became hyperesthetic. Because of marked hyperesthesia of the foot he never attempted to walk upon the extremity. The bullet apparently severed the left sciatic nerve with resulting deformity and atrophy of the leg and foot, equinovarus, and flexion contracture. Until admission to the prison hospital he wore a peg-leg into which his knee fitted.

He was received in the U. S. Penitentiary, Atlanta, in September 1944, to serve a five-year sentence for possession of still, etc. He rationalized past and present violations of liquor laws upon the basis of his physical condition. He did not look upon the nature of his offense as serious and was little concerned over his return to prison. He was correctly oriented and his comprehension, memory and imagination were fairly good. Judgment was impaired. Personality studies showed him to be insecure, hampering self-conscious and lacking in drive and continuity of purpose.

Neurologic examination was as follows: There are scars from bullet wounds over the lateral aspect of the left buttock and over the mid-portion of the inner aspect of the left thigh. There is atrophy of the musculature of the left thigh, leg, and foot. There is some contracture of the leg with ability to extend the same only one hundred and fifty degrees. Flexion of the leg is good. There is flexion of the left foot with ankylosis of the ankle, inversion deformity of the foot, and contracture of the toes. There is hyperesthesia to touch and pain, marked over the foot and moderate over the leg and thigh. There is ability to wiggle the toes of the foot. He can support himself balanced upon his left heel and left hand with the right thigh crossed over his left. This is indicative of fair strength in the extremity. Motor power in the leg is fair. Walking is not possible as the point of contact is the dorsum of the toes, which area is exquisitely hyperesthetic.

He was admitted to the hospital September 21, 1944, and was treated by narcohypnosis with pentothal sodium October 13, 1944. Suggestions were given him that his left lower extremity would become light and the previously existing hyperesthesia would disappear; this occurred. In the narcohypnotic state the toes of his left foot were extended and the extension in his left leg was increased from ten to fifteen degrees; the foot and toes were splinted. He was assisted on either side and escorted several times up and down the hospital corridor. Following a rest period and further suggestive therapy, he was induced to walk with the aid of a cane, with this physician holding his right arm to help him for balance. He extended the left leg poorly except when specifically told to do so and put most of his weight on the cane rather than on the member. He complained of pain in his left big toe from pressure of the splint, and walked on the tip of it. After several trips about the hospital with his cane he was returned to the treatment room where a plaster cast was applied to the foot and ankle.

The cast was removed from his foot October 18, 1944. He was fitted with a special shoe with a five-inch heel. The height of this heel was reduced progressively. At the time of discharge from the hospital, twenty months ago, he was able to get about quite well with a special shoe with a two-inch heel. The leg extended to about eight degrees of full extension. There remained some inversion of the foot and some contracture of the big toe.

The hyperesthesia has disappeared. He is able to do a full day's work in the mill, requiring much walking. There is also considerable improvement in his attitude and outlook. Note photographs of the foot before and after treatment.

A white male, aged 50, is the oldest of eight siblings from a family of limited means. He was born in Chicago, where he attended school, completing the fourth grade. His father was a scrap iron dealer. He died seven years ago at 63 years of age as a result of a fall. His mother died fifteen years ago. Both parents were natives of Russia. Patient married at 20 and is the father of two boys, 20 and 30 years of age, respectively. He was divorced by his wife three years ago. He has worked as a salesman for many years. His social adjustment has been rather poor. He was sentenced to the U. S. Penitentiary, Leavenworth, Kansas, in 1927 to serve a sentence of two years for violation of interstate shipment laws. Since that time he has been arrested on three occasions for mail fraud. He was received in the U. S. Penitentiary, Atlanta, in November 1944 to serve a five-year sentence for conspiracy and using the mails to defraud.

On initial psychiatric examination he appeared to be at ease, was amiable and ingratiating in manner, and somewhat elevated in mood. Speech was under considerable pressure and with much emotional display. He showed unusual ability in verbalizing his thoughts. He engaged in numerous lengthy rationalizations of his maladjustment and attempted to convince the psychiatrist that he had been both misunderstood and

sinned against. No delusional material, hallucinatory experiences, or depressive trends could be elicited.

He complained of the right second, third, and fourth fingers freezing up on him, and of inability to separate them out unless he first did so with his free left hand. He complained also of lack of strength in this hand. He stated he was first aware of "writers' cramp" at about 12 years of age. He was never a good writer. During the past sixteen years there had been some progression. He stated that in 1928 he fell backward on an icy sidewalk, lighting upon his right hand. His hand was sore for several weeks thereafter. In 1930 he had an infection of the dorsum of the right hand over the fourth finger, with lymphangitis. He demonstrated where the finger was incised over the proximal phalanx. At the time he heard his physician say that had he not come when he did he would have lost the hand. During the operation he believed he heard him say, "We will have to scrape all the way to the bone."

During the past five years he has had considerable difficulty in shaving and holding a pencil in his right hand. He went to a physician who gave him about six electric treatments with little improvement. He stated that although he has difficulty doing certain things, he was able to typewrite well with the right hand. He was correctly oriented and his comprehension, memory, and imagination were fairly good. Insight and judgment were impaired Personality studies showed him to be expansive, sanctimonious, self-deceptive, shrewd, and neurotic.

Grip in either hand as tested by dynamometer was 100 degrees. Radial, ulnar, biceps, and triceps reflexes were bilaterally hyperactive and equal. The tongue protruded slightly to the right without tremor. No sensory disturbances were elicitable. There was difficulty in performing fine movements with the right hand.

He was admitted to the hospital November 23, 1944, for treatment. He complained of his right wrist and fingers freezing up on him and this making him as nervous as if he had just had a quarrel. Whenever he would attempt to write his wrist would press down tightly against the table and his elbow would rise until the spasm of the extremity was complete. He also complained of inability to shave himself. He exhibited also occasional jerking of his head with elevation of the chin, and rotation of the head to the right.

He was treated by narcohypnosis with the aid of sodium pentothal. The following psychic-traumatic experiences were elicited: At 12 years of age he was sent out of the classroom for singing loudly. He stated that anyone would understand why he was sent out if they had heard him sing. This caused him to be unduly self-conscious. He had always been a poor writer and this embarrassment served to make his writing even worse. He began to masturbate at 16 years of age and engaged in this habit frequently—often daily. He first experienced tightness and numbness of the right hand and wrist during masturbation He related that his father, when sober, was the most lovable man in the world. However, when intoxicated he was abusive towards his mother. He had seen his father strike his mother on a number of occasions when intoxicated. When he was big enough to do so he would get behind his father and hold his arms.

He was treated in the sitting up position and instructed to write during the treatment. The improvement in his handwriting was dramatic. The mechanics of proper writing were demonstrated to him. He was encouraged to write with the weight on his forearm and fingers and with his wrist flexed. It was suggested to him that his fingers would not tighten and freeze upon the razor with his wrist in the flexed position. It was pointed out to him how it would be difficult for anyone to write or shave with the wrist hyperextended.

He was discharged from the hospital following therapy. When last seen one year later he had maintained the improvement gained during the treatment and had shown no tendency towards relapse. Diagnosis: Hysterical spasm, right hand, recovered.

# CHRONIC ALCOHOLISM

JOHN D. CAMPBELL, M.D.

*Atlanta*

Alcoholism, once considered a habit or a sin, is now looked upon as a crutch, a psychologic escape, for an inadequate, immature, hypersensitive, or emotionally unstable personality. Alcoholism may be a symptom, the chief complaint, a complication, or it may be used by the patient as treatment for his defective personality.

The difference between normal and abnormal drinking is not so much a matter of jiggers and pints as it is a matter of the personality of the drinker. Anyone who finds mental relief and solace from alcohol, and who thereby uses it to excess, is a chronic alcoholic.

Basically, the chronic alcoholic is a conscientious, sensitive, often introverted type of person. There are the potentialities of a preacher in many chronic alcoholics. At the same time the alcoholic possesses an impairment in confidence, a feeling of inferiority, which causes him to shut out reality, in an attempt to avoid the problems of life. Another facet of the alcoholic's personality is a tense, anxious, restless, irritable nervous system, causing him to experience such autonomic disturbances as pylorospasm, tachycardia, hot sweats, diarrhea, vasomotor upsets, or gastric distress. These symptoms are often used by the alcoholic as justifications for his drinking. A third characteristics of the alcoholic personality is a psychosexual immaturity. Being selfish and egocentric the alcoholic is usually incapable of that complex emotion known as love. At least, the alcoholic places personal satisfaction, freedom from

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pain and responsibility above his desire for the opposite sex.

These factors, which are the essence of chronic alcoholism, are chiefly unconscious to the patient. To explain his drinking, therefore, he looks about into his environment for excuses, or rationalizations, for his alcoholism. First, it is headaches or gastric distress; next, he blames his wife, saying she doesn't understand him, and later, after alcohol has produced some deterioration in his personality, the alcoholic is accepting anything he tells himself, so long as it justifies his further escape by alcohol.

An edema of the brain eventually impairs the individual's powers of integration, mentally and physically. There is a deterioration of the moral responsibility—no longer does he need rationalizations to quiet his conscience; that faculty is hardly functioning any longer. He is suspicious; it is a common delusion for him to suspect his wife of infidelity. When even an outsider tries to help him, they immediately place themselves in the camp of the enemy.

*Treatment of Chronic Alcoholism*

Treatment of the complications, or acute problems, such as acute alcoholism, delirium tremens, acute hallucinosis, alcoholic psychosis, polyneurities and nicotinic-acid-deficiency encephalopathy may be briefly outlined as follows: Upon admission to the hospital the patient is given intravenously 250 cc. of a 25 per cent solution of glucose, containing 15 units of insulin, 100 mg. of $B_1$ and 200 mg. of nicotinamide. This is repeated every 6 to 12 hours, depending upon the depth of the delirium and the response obtained. Although much less sedative is needed with this form of treatment, paraldehyde is accepted as the sedative of choice. Incidentally, paraldehyde may be given advantageously by hypodermic in doses of 4 to 6 cc. A careful search should be made for physical complications, such as pneumonia, cardiac decompensation, skull and other fractures, subarachnoid hemorrage, and perforated ulcers.

*Treatment of the Basic Personality*

As the patient recovers from his acute problem, whether it was simple drunkenness, convulsions, delirium, or a psychosis, the physician should seize the opportunity to advise psychiatric help. The patient should be told frankly of his condition; also that alcoholism is a psychologic disease and that it can be cured by proper methods, providing the patient is willing to cooperate.

The psychiatrist must choose his patients for this form of therapy. Mental defectives, psychopathic personalities, and outright schizophrenics do not make good candidates. The patient must be sincere, willing to stop drinking completely and cooperate with the therapist. One of my patients, urged by his wife and family physician, came for treatment, as he stated, "with an open mind." His mind was "open" in the sense that he expected the therapist to perform the cure. If the patient is intelligent and conscientious and sincerely wants to learn to live without alcohol, then we feel we can help him considerably.

The patient is not to consider the treatment as a course in "how to drink in moderation." He should be thoroughly convinced that he is a person who cannot use alcohol in any proportion. It is reiterated to the patient that at no time in the future, under no particular pleasant or unpleasant circumstances, as at a college reunion, convention, football game, or on a trip to Cuba or Paris, will he be able to drink alcohol, in any form or amount, without bringing upon himself again the disreputable condition from which he has so frequently recovered.

The patient's rationalizations are discussed with him so that he comes to recognize this immature thinking in its various deceiving forms. The object is to develop in the patient a mature, stable demeanor, teaching him not only sobriety but also self-control, poise and self-assurance. One man who operates 3 stores, stated that the treatment had not only stopped his drinking, but that he had developed a new attitude toward life and his work. "In fact," he added, "I haven't fired anybody since I started this treatment and before that I fired someone every day."

Nervous tension should be prevented by the proper use of relaxation; small doses of phenobarbital, ¼ grain 4 times per day; and by encouraging the patient to avoid hunger by munching on candy, thus maintaining a good glucose level.

Since the alcoholic cannot bear boredom, restlessness, or uncomfortable moods, hobbies, sports and other recreations should not only be encouraged but insisted upon. Peabody mentions the advantage of having the patient fill out a daily schedule each night, for the ensuing day, not allowing any time to be left idle. Although moralizing is avoided, the conscientious, idealistic alcoholic may obtain the particular satisfaction he needs by affiliating himself with a religion. Occasionally one is observed who is naturally religious but who has avoided church because of some resentment or other immature attitude. Of great importance, of course, is helping the patient to become adjusted to an occupation from which he obtains satisfaction, as well as one which is suitable to his temperament.

*Alcoholics Anonymous* has done some good in this field as it deals with the alcoholic on his own level and involves religion as an ally of living. Some alcoholics, however, use this organization as a cover-up for their drinking. One of my patients became so emotionally stimulated at each Friday night meeting of *Alcoholics Anonymous*, that Saturday morning always found him suffering from a hang-over.

Although the wife is not directly to blame, she is often unconsciously encouraging her husband's drinking. It is amazing how often the chronic alcoholic has chosen a wife with strong motherly instincts, a conscientious, home-loving, dependable individual, who will go to any extent to protect her spouse and preserve the pride of the home. Little does this self-sacrificing woman realize, as she tearfully describes her alcoholic husband, that she surpasses her husband in strength and character, that he is immature, and dependent on her for his emotional adjustment. He is often using her as a mother substitute. Anxious to maintain her romantic dream, established some 5, 10, or 15 years before, it is difficult for this good woman to face the fact that her husband is weak and ineffectual. When instructed along these lines, the wife ceases to rely on tears and prayers and begins to assert herself. In some instances, where the husband is wrecking their home anyway, one is justified in urging the wife to have a lawyer draw up separation papers and coolly call the husband in to discuss a settlement. Although I am opposed to divorces, this step, without any further procedure, on several occasions produced excellent results out of a foul situation.

The alcoholic, like the psychroneurotic patient, is given ample opportunity to unburden his mind. Significant dynamic factors are often encountered. A professional man, a former well-known football player, betrayed in the analysis such a fixation and dependence on his mother that he had never been able to emancipate himself emotionally. Although married, and professing to love his wife, he had unconsciously resented her usurpation of his mother's place in his life. He felt such an allegiance, such an undue alliance, with his mother that he

felt like a traitor to her in accepting his wife without reservations. His drinking was an expression of his allegiance to his mother, and resentment for his wife. Under the influence of alcohol he was a dashing reckless character, but to the psychiatrist, and eventually to his wife, he was obviously an immature personality, blaming his wife for all of his own deficiencies.

A college boy had discovered while in the Army that he possessed latent homosexual desires. Coming from an excellent family, this sensitive young man unconsciously used liquor as an escape from an intolerable situation.

Another chronic alcoholic, a single man 38 years of age, made his home with his mother, a neurotic individual herself. She was obsessed with a desire to keep her son emotionally dependent upon her, as she was upon him. The man had been in love a couple of times but each time the mother became so emotionally upset, as a result of jealousy and resentment, that the patient had abandoned his plans for happiness. Parenthetically, it should be added that this man was psychosexually immature or he would have been more resolute in carrying out his love affairs. When the patient thought of his mother's domination of his life, he developed such feelings of resentment and hostility, followed by ideas of guilt and shame, that he resorted forthwith to alcohol as an escape from his misery. Unfortunately, the mother would not come for treatment, but when these factors were analyzed and discussed with the patient, he began to understand his drinking as a crutch, and a means of escape from a trapped situation. With his new insight and psychotherapy he has now been able to adjust satisfactorily without alcohol for over a year.

A conscientious but immature housewife began to drink when her husband developed impotency. Since he would not cooperate in treatment the wife gradually ruined their home by her complete abandonment to alcohol.

Two patients, one male and one female, with chronic eczematous neurodermatitis, found in alcohol some escape from their uncomfortable and embarrassing condition. As might be expected, alcohol aggravated the dermatitis, and the patients in turn drank more to relieve the symptoms.

An occasional patient in the depressed phase of manic-depressive psychosis attempts to relieve his despondency by alcohol, thus complicating the mental reaction.

Alcohol, therefore, continuously plays its part, either as a symptom, as a complication, as a form of therapy, or as a toxic agent itself in various personality disorders.

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## HEALTHGRAMS

Although roentgenograms play an all-important role in objectively discovering and delineating tuberculosis lesions, they will never be accurate enough to supplant sound medical judgment. R. V. Platou, M.D., Am. Rev. Tbc., April 1947.

* * *

Think of the benefit from a campaign to stop the spray of infected mouth and nose droplets! Not only would the spread of the disease be slowed but the seasonal surge of diseases like the common cold, influenza, measles, whooping cough and pneumonia would diminish. It would be possible to go to a movie without having a germ-laden spray hurled at one from behind and consequently having to suffer from the other fellow's respiratory infection. Under these conditions, dodging the tubercle bacillus, in and out of the hospital, would be possible for all of us. Ezra Bridge, M.D., NTA Bull., June, 1947.

* * *

A turning point has not been reached in the chemotherapy of tuberculosis. Although streptomycin may not be the final answer in the treatment of this scourge of mankind—and I hope that it is not—it has opened a new path, a path of antibiotic approach to chemotherapy, an approach sought since the discovery of the bacterial nature of the disease; the control of tuberculosis may finally materialize and thus advance man one step further in his battle against disease and epidemics. Selman A. Wakeman, D.Sc., Ph.D., JAMA, October 25, 1947.

# THE DYNAMICS OF PATHOLOGIC DEPRESSION

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Depression or "melancholia" was descriptively well known to the ancients. The picture is that of a person profoundly sad. The face elongates; the head droops forward as do the shoulders; the brow is furrowed, and the eyes staring, brooding, or troubled; the posture is subdued and the gait, as well as other movements, slowed down. The patient usually complains of feeling weak; of having no appetite; of sleeping poorly. On the mental side they say they are unable to concentrate, to "feel" anything, or to remember well. On the physical side the complaints range from indigestion and sluggish bowels (which are a part of the physiology of the depressive reaction itself) to headache (which is a consequence of the posture—the fatigue of the occipitofrontalis muscle leading to band-like sensations and fatigue of the neck muscles leading to aching which radiates from the occiput to the shoulder blades). These are almost universally present. In addition there may be any sort of somatic discomfort or hypochondriacal symptom one could imagine on either the mental or physical plane.

In short, the term "depression" in itself describes the condition. Since we all have depressed feelings from time-to-time we should not be too confused about it. That our more normal reactions do not carry in their wake the long train of symptoms described above is evidence of their normality. It may be difficult for some of us to realize how much more profound the pathologic reactions are.

The earliest mention of these conditions is in the Bible. Saul was depressed when "an evil spirit from the Lord descended upon him." The illness was recurrent and was treated successfully in some of the episodes by David's harp playing. The dynamics as conceived here belong to the realm of demonology.

The ancient Greeks recognized these conditions, and were responsible for the classical name. The humoral pathology of Hippocrates and Galen attributed the depressed condition to the presence of too much black bile; hence the term "melancholia" which means just that. Hence also the attempt to treat them with purges to correct that situation.

Shakespeare, in the opening lines of the "Merchant of Venice" makes Antonio say, "In sooth I know not why I am so sad. It wearies me; you say it wearies you. But how I caught it, bred it, or came by it, I am to learn; and such a want-wit sadness makes of me that I am much ado to know myself." This is as good a description of how the patient feels as any in the literature. The ignorance of what it was really all about was true of the clergy, philosophers, psychologists, and medical men until more recent years.

From the earliest times it was noted that, in general at least, these reactions were linked with the habitus, or body type. Also the tendency to swing between periods of elation and depression were noticeable in the same people. It remained for Kraepelin to bring the elated and depressed phases together into one category—the "manic depressive" psychoses. Kretchmer, in his "Korperbau and Karactur" linked these psychoses to the habitus. All this was in keeping with the general trend, toward the end of the last century, to blame heredity and constitution for our behavior. It

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amounts to a genetic rather than a dynamic theory.

The result was that most of us were taught that these conditions were to be expected. It was as though we could postulate a normal zone of emotional reactions between the borders of which we all would fluctuate more or less—our "good days" we would be "up"; on our "bad days", "down." The characteristic "set" of the individual would be determined by inheritance through the probable (or should we say plausible?) medium of endocrine function. Some would be set higher; some lower. Some would have wide swings; some narrow. If one were set too high or too low the peaks or troughs might easily pass beyond the boundaries of the normal and then one would have recurrent manic or depressive attacks as the case might be. If the swings were too wide one might get manic-depressive alternating or cyclic reactions.

Also, individuals who were set too near the borders might pass beyond them into elation or depression in response to stimuli that could be expected to cause normal rise or fall in others.

It was of course recognized that the response to loss of something valued by an individual could lead to depression too—and that if reality losses accumulated sufficiently one might be pushed beyond the normal zone. These would then be called "reactive depressions" in contrast to the more "constitutional depressions" previously described.

The constitutional factor might be illustrated by a patient seen at Taunton State Hospital in the summer of 1924. This woman, in her late fifties, suffered from alternating days of elation and depression. During the illness a severe cerebral hemorrhage occurred leaving her paralyzed on the right and aphasic when she emerged from coma several days later. The daily alternations of mood came back with the return of consciousness so that they could easily be imagined to be deeply rooted in her constitution.

Some years ago we experimented with prolonged sleep therapy on a number of patients with mood swings. Two of these who had fairly fixed periodic reactions would regularly emerge from deep sleep in the phase they would have been in had they not been narcotized, even though one or more complete periods had been blotted out by the drug.

Such reactions seem to substantiate the postulate that the source of the manic-depressive reactions are basically constitutional in origin. However, since these are the only cases I have ever seen react in this way, I would further postulate that the purely constitutional reactions must be quite rare.

Equally rare are the purely reactive types. Search for evidence of such types reveals only one somewhat doubtful case that is well substantiated. Purely reactive manic episodes are not to be found.

We had arrived then, at a position in which we could think of most of the depressive reactions (including those with manic swings) as being mixtures of constitutional and reactive elements, the tendency to recurrence of which could be predicted on the basis of which type of factor predominated. Regular recurrence of episodes would be taken as evidence of the dominance of the constitutional elements.

More intensive study of regularly recurring episodes of depression and elation or equivalent states in the nature of periodic headache or other somatic complaint with sleep and appetite disturbance, resulted in the discovery that these events either took place in relationship to an anniversary of an important event in the individual's life, traumatic in character, or that the indi-

vidual again through behavior of his own had created a situation similar in all respects to the original precipitating situation of the first depressing episode. For example, Brill reported a case with recurrent depressions in the spring in relationship to the anniversary of the suicide of the mother. We saw a case of recurrence of depression with headache in memory of the death and burial of the father with repressed hostility toward the mother who was held by the patient to be responsible for the father's death. Also, annually recurring depression in relationship to a stillbirth nine months following the murder of his brother by the patient's husband. There are many similar cases. It was necessary to come to the conclusion that many of the events which precipitated depressions and resulted in recurrence were of such a nature that often the patient would not divulge them, even if conscious of them. It became clear also that very often the patients were not aware of the precipitating event having repressed it from their memories.

These facts emphasize the importance of the reactive factors in the cases as contrasted with the constitutional factors. There remained, however, the fact that certain types of individuals would become depressed in response to these traumatic episodes as other individuals would develop more dissociating types of illness such as the schizophrenic reactions. We felt it was justifiable to consider that the question of depression or schizophrenic illness would depend upon the basic constitution of the individual. The more introverted individual developing schizophrenic, whereas the more extroverted would develop illnesses with mood swings.

Further investigation of the nature of traumatic episodes efficient in setting off depressive reactions led to the discovery that what we were primarily concerned with was a group of individuals who were unable to handle hostility in relationship to the people whom they love, or whom they were supposed to love. Characteristically, most of the people who develop true depressive episodes are known as "sweet" individuals; that is, they are people who allow themselves to be imposed upon without defending their rights, especially when the imposition comes from a person they love, or whom they are supposed to love. The same behavior pattern is seen in the early life relationship of these people toward the mother and the father. The pattern carries over into later relationships and they find it quite impossible to say "No" to people, even strangers. In general, they find themselves doing many things they do not want to do because they are afraid people will not like them. If they do become angry, the anger is apt to come in a stormy outburst and to recapitulate many offenses in the past because the simple hostilities which could have been covered adequately by a simple statement of their desires have not been so handled and have piled up inside of the person. Since the outburst is excessive it is usually ineffective in producing the desired result, only arousing hostilities in the object of the attack. The patients find themselves embarrassed and humiliated by having to apologize for the outburst, thus accumulating another load of hostility in the same direction. However, as the load of hostility assumes explosive proportions, the patients still remain unable to discharge them externally and they turn the hostility back upon themselves, feel guilty, become depressed, and punish the object of their hostility by their depression. They take the blame for everything and suffer acutely, making sure that those in their environment are thoroughly aware of the depth of their pain.

At times it is easy to be misled concerning the hostile nature of the depressed episode. Recently we had the opportunity

to study a man and his wife, both of whom had become acutely depressed. They had been known as "the ideally loving couple", never having a harsh word between them. However, shortly after the marriage the man became depressed for a period of four months. He recovered from this but shortly thereafter his wife had a depression that lasted a few months. She too recovered. There then followed a series of three other depressions in the man about two years apart, each one of which was associated with failure on a new job which represented a considerable advancement for him. In the fall of 1945 he had undertaken a new business of his own which he found to be failing and from which he had to withdraw with some loss. He again began to dig into a depression and his wife was very much disturbed. The man's illness continued to grow in depth until on Valentine's Day 1946 he came home at noon to find his wife in the bathroom with her throat and wrists slashed and a note to the effect that she could not stand to see him again mentally ill. This kindness on her part was met by slashing his own wrists and throat.

They were both found by neighbors before they had died, were sent into hospitals, transfused, and recovered, following which they separated for a period of time. They still have had no air-clearing quarrel or frank discharge of their hostilities toward each other and it has been impossible to activate in either of them a clear awareness of the hostile nature of their actions. However, to their lay friends and to their families these two suicidal attempts represent acts of love and not of hostility.

Those who are familiar with the works of Karl Menninger, particularly his volumes "Man Against Himself" and "Love Against Hate", would be quite aware of the mechanisms underlying these depressions. It has been known for sometime that the basic pattern is laid down in connection with the nursing and the weaning period, during which time hostility on the part of the infant is met by withdrawal of the love object often in the nature of abrupt weaning. Because of the nature of this origin the people who suffer from recurring depressions are invariably of the type that psychoanalysts refer to as "oral." Many of them manifest tensions about the mouth, are embarrassed when eating in the presence of others or show tick-like movements of the tongue and lips. Often in their love-making they are freely oral erotic, not recognizing the relationship of the sexual use of the mouth to the nursing period of infancy.

Because the infantile hostility has resulted in the loss of the love object, the child can no longer freely express hostilities and has to repress and bury them. This results in pretending to love potential love objects. However, because the hostilities are *repressed* the love has to be excessively expressed. The tensions underlying the love are drained off; those underlying the hostilities accumulate. In such individuals sudden transitions from appearance of intense love to intense hate are not uncommonly seen. These reactions can reverse themselves if the patient is able to discharge the hostilities freely and directly upon the object toward which they belong. They are then able to love again. If they again accumulate hostilities, the cycle may repeat itself many times. Such reactions are regularly observed in such patients, and any alert psychiatrist can detect them as they develop.

These reactions are favored by certain conventional mistakes which are perpetrated in our culture. One of the most serious of these is the idea that if we love someone we do not hate them. The nature of love is quite different from what is usually accepted and it is now a well known fact that love at the conscious level is

generally underlain by hate at the unconscious level and vice versa. In fact, one could say that only people whom we love could really hurt us. Because of the intensity of the repressed hostilities, patients who develop depressive reactions are not really able to love anyone freely. They must force the exhibition of love in order to bury the hostility deeper.

Since they are unable to love anyone and since they feel that no one would love them if they knew of the hostilities buried within them, they are continuously attempting to buy love by their acquiescence in demands of others, giving in to any persuasion and trying to make "everyone like them." They cannot stand to have anyone dislike them. Love which is purchased in this way obviously does not belong to the individual himself, but to what he is pretending to be and there is always the danger of being found out and not loved. In fact, the very act is a testimony of the individual's conviction that no one can love him as he is.

This results in the peculiarity of their love attachments. They are forever seducing love objects by pretending to be much sweeter than anyone could be. If they are successful in the seduction, the love object immediately loses value because either: (1) If they are such horrible individuals as they conceive themselves to be and the love object sees them as they are, then the love object demonstrates in loving them that they also are very bad people, or (2) The love object has been fooled and deceived by them and therefore the love is insecure and the situation with that love object becomes intolerable, being always threatened with loss when the seduction is discovered.

Depression in response to the loss of a valued thing must be taken as normal. Normal depressions result regularly in an attempt to replace the lost object and do not lead to suicidal attempts or to a complete withdrawal from attacks upon reality. Where the depressive reaction is in excess of this, one can postulate that the hostility underlying the depression is of paramount importance and that the depression will last until the hostility has been discharged or re-repressed.

These considerations lead up to a therapeutic approach to these problems in which the patients are encouraged to activate the hostility at the conscious level, to discharge it toward the love object and free themselves from the necessity to love so that they can love of their own volition. In other words, the tension underlying the hostility can be discharged effectively at the conscious level and the love object can again be loved. In order to do this, however, it is often necessary to prepare the families of these patients to receive the load of hostility as it is discharged in order that the traumatic experience of the past be not repeated and that the love object be not again withdrawn because of the hostile expression.

A frank discussion of these mechanisms with the patient and with the patient's family frequently results in a clearing of the air and a much better understanding of the nature of the disorder to which these people are subject. Where this is the case, husbands, wives, mothers, fathers, brothers, sisters, and friends of the patient often accept graciously the complaints of "mistreatment in the past."

This type of reaction must not be taken too seriously, however, because the patient must learn to be tough enough to protect himself against the aggression of anyone. As the patient finds himself progressively stronger in protecting his rights, his self-respect increases, there is an expansion of the ego and the depression lifts. As long as the discharge of the hostilities can be kept current, no recurrence of the depression is to be expected.

There remains to discuss the relationship of the manic episode to the depression. Patients in manic excitement, if stopped long enough to give a serious response to the question as to how they feel, often reply that they feel terrible underneath and that in their gayest moments they feel worse. In fact, it is quite clear that the intensity of the depression from which the patient is fleeing can be measured by the intensity of the manic excitement.

Since this is the case, we look upon the manic episode as a flight from the depression, the true illness being the depression. For this reason we feel that patients are nearer to being well when they are deeply depressed than in the seemingly more normal condition of elation or excitement.

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## DISCUSSION OF PAPERS BY DRS. ESTES AND NEW; LIPTON AND FANCHER; CAMPBELL; AND WOOLLEY

DR. EDWIN W. ALLEN, (Milledgeville): I am sorry that Dr. Woolley's paper was not completed and that I shall be unable to discuss that, as I did not have an opportunity to read it.

I am not familiar with narcohypnosis, so I am unable to discuss that paper.

I should like to thank Dr. Campbell for his complete presentation of chronic alcoholism. He has evidently devoted long hours of study and work to this subject, and I am sure he gets results where others of us fail. We are badly in need of competent psychiatrists who are interested in the chronic alcoholics and who make a serious and prolonged effort to help them.

There are occasions when chronic alcoholism develops in a normal, mature, successful individual, particularly so when this mature individual becomes economically secure and retires to a life of unemployment and usually pleasure-seeking. As Dr. Campbell has expressed it, in these cases the alcoholism becomes a crutch for the feeling of uselessness. Social or economic security may often be a liability instead of an arcadia.

Dr. Estes and Dr. New emphasized the dangers of the monotony of prolonged confinement as being a factor in the production of a psychotic reaction. This same factor is present in any institution, whether a prison, an asylum, or a sanitarium, that confines an individual without a program of constructive work and recreation. Their paper will be a stimulus to those of us who have the responsibility for the care and treatment of the psychotics, to prevent the monotony of institutional life as much as possible.

I should like to call to the attention of our Association the fact that there are now 39 psychiatrists who are either diplomates of the American Board of Psychiatry and Neurology or members of the American Psychiatric Association and are in private practice in Georgia. There should be at least 1,000 beds available for their patients, either in private sanitariums or preferably in private wards connected with general hospitals. There are available less than 250 beds. In view of the fact that the field of psychiatry is not only broadening but is integrating more and more with internal medicine, it is the duty of our profession to encourage and promote a private psychiatric ward in every city in our State with a population of 25,000 or over.

DR. J. W. SIMMONS (Brunswick): This is an interesting program. I can, for the first time since I was eighteen years of age, disclose what I have kept subrosa. The study of hypnotism or autosuggestion—control of the waking state and even catalepsy—has been one of my side lines. I have not let many people know it, but every doctor knows, of course, that he uses a certain amount of autosuggestion. My 16-year-old grandson is following in my footsteps, and we sometimes use it for our own amusement. There is not room enough on the couches of all the psychiatrists in the United States to treat all the patients.

I merely want to cite two cases which have been treated by me with autosuggestion and narcohypnosis. I can bring it into the open now, because it has been brought into respectability.

In discussing Dr. Estes' and Dr. New's paper, I do not think we would have had Bunyan's "Pilgrim's Progress" if it had not been for prison psychosis. Also, I think we would not have had much of the jazz music that we have unless we had psychotics.

To come to the two cases, one of them was a woman with menopausal psychosis whom I treated a few years ago. She thought she could not breathe at night while lying down. She kept her husband awake and also other people in the house. Taking my secretary into the dressing room with me, I had the woman lie down in a comfortable position. After she got calmed down I suggested to her, in my most monotonous tones, that when she lay down at night in bed she was going to sleep at once and would sleep quietly. She slept for about fifteen minutes, when I awakened her in the usual manner, by suggestion, she was calm. She has had no more dyspnea.

The other case was that of a woman who was traveling with her husband. They were staying at a tourist house, and he came to see me. He told me that she had become addicted to alcohol, that she had a good background, but that she seemed unable to break herself of this habit. I told him to put her in a hospital immediately. They took her to a hospital, and in ten minutes a nurse called me and said they could not get her out of the car, that she was kicking her husband in the shins and clawing him on the neck. Five minutes later they called and said they had gotten her in the hospital, and I told them to put her to bed immediately and to give her sodium amytal. I went down to the hospital later, and the patient was partially narcotized. Often I find that prayer is more efficacious than pills. I went to the bedside and said: "Will you say a prayer with me?" She said: "I used to pray." So I repeated a prayer, and she repeated every syllable after me. Then I put my fingers on her eyelids and suggested that she go to sleep, which she soon did. They called me a few hours later and said the patient was up and dressed and ready to go. I had told the husband she ought to stay in the hospital all night. When I went down I found her sitting in a chair; she was beautifully dressed in a coat suit, with a camellia on her shoulder. I went over and spoke to her, and tears began to stream down her face. She said: "Doctor, you have done something for me that no one has ever done before and that I shall never forget. I am not going to drink any more." I said: "You are going back to the tourist home now. I shall be down there tonight to play bridge, and I will see you." That night I was called out from the game to see her and her husband. He said: "I want to pay you and to thank you." Tears were streaming down both their faces. He said: "We shall never forget what you have done."

I mention that thing to show that these emotional upsets can sometimes be cured by a little sympathy, a little prayer, a little encouragement, and hypnotism. I thank you, Dr. Lipton, for bringing it into respectability.

DR. JAMES K. FANCHER (Atlanta): My interest in narcohypnosis is limited chiefly to those patients I have seen with sterility and impotence in whom there was no demonstrable physical or glandular disorder. Three of the cases which Dr. Lipton presented were first seen by me. One case he presented was most interesting in that this man was a former All-Southern guard in Georgia Tech. He was a captain in the United States Army. On examination he proved to be a perfect specimen physically. His wife first consulted me about him, stating that she felt there was something wrong in that their marital relations were held only on her insistence and that he considered it as a duty. I asked her if they had done any petting during their courtship, and she said no. I asked her if she did not consider that abnormal, and she said no and that she thought he had such high ideals he was waiting until marriage. I asked him why he married the girl. He said he thought she was good looking and of a high type and he liked her, and so he married her.

It takes sometimes several treatments to bring about a cure. This man we consider a cure, because it has been some time since he has had any trouble. We think he is cured.

Incidentally, it was mentioned in one of the treatments given a patient who was a chronic smoker that she would not smoke any more, that cigarettes would taste bad to her. The next morning I went in to see the patient and found her smoking. There was a half-smoked cigarette on the ash tray. She said: "I want something, but this is not it. It tastes terrible," and she threw the cigarette away.

I have used narcohypnosis on some patients who were smoking to excess. I used it on one man whom I had stopped from smoking several years before. He stayed off tobacco for about a year and a half but resumed its use and was smoking about forty cigarettes a day. A treatment with narcohypnosis caused him to stop entirely.

This treatment is not a panacea. The patients must want to cooperate. They must want to be set straight. You cannot do it for them; you can only help them. There are many failures in cases which are not properly selected.

DR. JOSEPH S. SKOBBA (Atlanta): Dr. Campbell in his paper did not make a distinction between the causes and the effects of alcoholism. I wish to emphasize the importance of making this distinction. We have treated the effects of alcohol or chronic alcoholism but have failed to treat the cause of this condition. One of the first steps in the treatment of alcohol addiction is to convince the alcoholic that his drinking is a symptom and not the illness. The family physician can convince the patient of that. The patient has implicit trust in his family physician and accepts his advice readily. The family physician can treat emotional illnesses successfully as brought out by Dr. Simmons. When we change our focus of attention from the alcohol and its effects to the personality difficulties underlying the addiction, we shall be well on our way to solving this distressing problem.

DR. HARRY R. LIPTON (Closing): I should like to add just a few words. Recently I have had three industrial cases I treated by narcohypnosis, all three of whom recovered. The first one was a colored man 26 years of age who had sustained a cut of the forearm. The cut was about two inches in length. He had it sutured and put in a sling, and when the sutures were taken out he could not use his hand. He had been carrying the arm in a sling and by his side for about seven months when I saw him, and there was already some atrophy of the muscles of the forearm and the hand. You could tell he had not used the hand, because the skin was macerated in the palm of the hand. I hospitalized him in Grady Hospital, Atlanta, and treated him one evening. I had him use the hand on the operating table and do everything with it, and he used the hand in getting back into bed. The next day he had very little function in the hand, but he did have some movement. I had him squeezing a rubber ball and swinging a tennis racket and carrying a sack of rocks. I treated him for about three weeks, and he had fairly good function in the hand by that time. He returned to work and has been working regularly for the past five months.

Another case was a woman working in a garment factory and operating a sewing machine. The machine kicked back in October 1946 and sprained her arm. The plant doctor put the arm in a splint and kept it in a splint for about three weeks. When the splint was taken off she could not use the extremity. She had a little motion, but that was all; she could not use it to work with her hand. I treated her several days ago. She now has the same grip in both hands as tested by dynamometer. She is going back to work next week.

The third case was a rather low-grade mental defective who was working in an automoble plant. A gang plank slipped and hit him on the left foot. This was in December, 1944. No bones were broken, but he developed sensory disturbances in the extremity. The extremity was weak, and he was unable to use it; he got about on crutches. He was operated upon and a sympathectomy was performed in August 1946, and most of the sensory disturbances cleared up. The warmness returned to the extremity, but he was still unable to walk without a pair of crutches or a crutch and a cane. I treated him several weeks ago. The strength returned to the extremity on the treatment table. I got him up and went out of the building with him and walked him up and down the sidewalk. When I went back to the office with him I said: "Gather up these crutches and sticks. Where did you get them?" He said: "From Dr. So-and-So." I said: "Deliver them to him; you will never need them again." He went back to work and has been working now for several months.

Hysterical psychoneurotics will get well and stay well for several weeks or several months or a year following narcohypnosis and then relapse. I find I have to do intensive psychotherapy on these patients and work out the underlying conflicts. When these are resolved there is no reason for the patient to have migraine, asthma, pains, or motor disturbances.

## URETHANE PROVES TOXIC IN LEUKEMIA; PATIENT DIES

Urethane, a drug recently used with promising results in the treatment of leukemia, sometimes called cancer of the blood because the white blood cells multiply too rapidly, is apparently more toxic in leukemia than is generally believed, John Joseph Webster, M.D., New York, warns in the December 6 issue of *The Journal of the American Medical Association.* He reports the second case in which a patient died after treatment with the drug.

Urethane, used chiefly in other diseases to relieve fever and spasms and produce sleep, has always been considered relatively safe and nontoxic. The first report of the effect of urethane in leukemia appeared in 1946. It revealed that the drug usually causes a decrease in white blood cells in this disease.

In the fatal case which Dr. Webster reports, the patient was treated with x-rays and later with daily doses of urethane. The drug was withdrawn because the patient developed complications, but he died within a short time—with his once-too-numerous white blood cells virtually non-existent.

"Urethane promises to be a valuable aid in the therapy of leukemia," Dr. Webster writes, "but the reports of untoward results warrant further investigation before widespread use is advocated."

**The Medical Association of Georgia will hold its next annual session in Atlanta, April 27-30, 1948.**

# SUBACUTE BACTERIAL ENDOCARDITIS

## *Report of Patient Treated with Massive Doses of Penicillin*

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Before the advent of the antibiotics the diagnosis of subacute bacterial endocarditis was merely a medical curiosity to the physician but a death knell to the patient. Many forms of therapy were tried but all were disappointing. Chemotherapy consisted of various antiseptics, dyes, arsenicals and salicylates, but these were ineffective. Serums, transfusions and vaccines have all been tried without success. It was a disease in which, if the patient recovered, there arose the question as to the correctness of the diagnosis.

With the introduction of the sulfonamides, the prognosis improved and under adequate treatment a 15 per cent cure was reported. Due to the toxicity of the drug, in doses required for treatment, sulfonamides failed to become widely used. Penicillin brought forth renewed hope for those with the disease and renewed interest to those physicians fighting for the lives of these patients, but it was soon found that certain bacteria, which are the causative agents for subacute bacterial endocarditis, were resistant to penicillin as well as other drugs.

It is the purpose of this report to show the efficacy of massive doses of penicillin even in the presence of bacteria which were supposedly totally resistant in vitro, to penicillin, streptomycin and the sulfa drugs.

Presented before the general staff of Crawford W. Long Memorial Hospital, Atlanta, September 1947.

### *REPORT OF CASE*

Mrs. L. K., a 39-year-old white secretary, first entered the hospital April 28, 1947, complaining of pain in the right foot and "splotches on my legs."

Before entering the hospital she consulted her physician because of a tumor in her abdomen which she had discovered several days before while taking a bath. This tumor was the enlarged spleen.

The present illness began in November, 1946, when she suffered with severe muscle cramps in the right calf which persisted intermittently for approximately two weeks and gradually disappeared. At the same time she noticed several small purpuric spots around her ankles and lower legs. They varied in size from 0.5 mm. to 1 mm. in diameter. At first they had a bright red color and gradually faded in two to three weeks.

These purpuric spots had continued to appear suddenly and gradually regress since November, 1946, and appeared steadily higher on the legs to the mid-thigh. However, she had not noticed them elsewhere on the body.

The day before admission, the patient began to suffer with a constant, stabbing pain in the distal phalanx of the right little finger which persisted and there was some redness of the fingertip. On the morning of admision, an aching type of pain developed in the right foot.

*Past Medical History*: At the age of 11 the patient had "rheumatism." She thought all joints were affected and became red, tender and swollen. She was in bed three months with the illness, and at that time she recalled that the doctor told her father about a bad heart and that she would be handicapped during her life.

*Family History*: Irrelevant.

*Physical Examination*: Physical examination revealed a well developed, well-nourished woman in apparent slight discomfort. Blood pressure was 110 systolic, 75 diastolic; temperature 100.2; pulse 94.

There was a blowing, slightly roughened diastolic murmur which was heard best over the aortic area and transmitted over the apex.

The spleen was enlarged to five finger-breadths below the costal margin, but not tender.

There were many petechial lesions on both lower legs, varying from pin-point in size to 1 mm. in diameter; they were flat, did not fade with pressure and varied in color from bright red to light brown. A few of the lesions were on the lower part of the thighs.

The right foot was moderately swollen, slightly reddened and very tender to pressure on motion and the right fifth finger was red in the distal phalanx and very tender to pressure. Clubbing of the fingers was also present.

On admission the red blood count was 3,480,000; white blood count 5,850 with 79 per cent polymorphonuclear cells, with a shift to the left. Sedimentation rate was 50 mm. She continued to run a fever between 99 and 101 degrees Fahrenheit, and the pain persisted in the right foot and right little finger. On April 29, 1947, a blood culture was negative, but repeated cultures on April 30 and May 1 were positive for streptococcus viridans. On May 2, penicillin was started with a dosage of 100,000 units every three hours. She seemed to feel better the next day and her foot and finger were improved, but she continued to run the same fever.

Penicillin, sulfonamide and streptomycin sensitivity tests were done and the streptococcus viridans was found to be entirely resistant to the three drugs. Despite this, 100,000 units of penicillin were given every three hours and, because of financial difficulty, the patient was allowed to go home on May 5, 1947. She was told to stay in bed, and the penicillin was continued in the same dosage.

During her stay at home she did not respond to treatment, but became weaker, lost ten pounds in weight and continued to run a fever.

Therefore, on June 2, she was readmitted to the hospital. Physical examination was essentially the same as on the previous examination, except she seemed to be weaker, showed evidence of weight loss, complained of aches and pains over the body, nausea and was mentally depressed. At this time, in addition to the penicillin, one gram of sulfadiazine was given every three hours with the hope of some beneficial effect. Instead, she developed a toxic reaction to the sulfonamide, which was manifested by increased fever (102.4°) and a diffuse papular rash over the body. The blood level of the sulfadiazine at this time was 8 mg. per cent. The sulfa drug was discontinued the next day and the rash cleared in a few days.

She continued to have a steady downhill course for the next ten days, although she had been given symptomatic and supportive treatment. On June 17, it was decided to give 1,000,000 units of penicillin every three hours, in spite of the complete resistance *in vitro* of the organisms to penicillin.

Her general condition began to improve gradually but continuously after massive penicillin therapy was begun. She had less pain, became afebrile and developed a brighter outlook on life. Her blood culture became negative and the spleen regressed in size. She was dismissed on June 24. At home, she was given 1,000,000 units of penicillin every three hours and had complete bed rest for three weeks. Her improvement was remarkable. Four blood cultures have been negative since. She has gained weight and strength and feels entirely well. On October 25, 1947, a final blood culture was negative. Her total white blood count was 5,400 and the sedimentation rate was 24 mm. in an hour (corrected to 10 mm.). At the present writing, she is working every day and is able to perform her duties as well as before her illness.

The total dose of penicillin given her was 261,100,000 units.

### *Conclusion*

This case clearly shows the value of giving large doses of penicillin in subacute bacterial endocarditis even though the causative organism, streptococcus viridans, was apparently penicillin resistant *in vitro*. The usual dosage of 100,000 units every three hours proved to be totally ineffective and perhaps a waste of the drug, but when increased to 1,000,000 units every three hours the patient improved dramatically. It has been estimated that as much as 20,000,000 units daily might be necessary to cure some of the more resistant cases.

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### POSTGRADUATE COURSE IN DISEASES OF THE CHEST

The American College of Chest Physicians, Pennsylvania Chapter, and the Laennec Society of Philadelphia are sponsoring a postgraduate course in diseases of the chest to be held during the week of March 15-20, 1948, at the Warwick Hotel, Philadelphia, Pa.

The emphasis in this course will be placed on the newer developments in all aspects of diagnosis and treatment of diseases of the chest.

The course will be limited to 30 physicians. Tuition fee is $50.00 for members, and $90.00 for non-members.

Further information may be secured at the office of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

## USE OF RADIUM IN THE NASOPHARYNX FOR DEAFNESS AND ITS CLINICAL EFFECTS

*Report of Cases*

JAMES LAURICE JENNINGS, *M.D.*

*Atlanta*

The use of radium in the nasopharynx for certain types of deafness and otitis media has been carried out by eminent authorities. Dr. S. J. Crowe and associates, of Baltimore, have used radium for the past eighteen years, and have done a thorough carefully studied series of cases of several thousand school children[1]. Their principal interest was to prevent deafness and, when possible, to restore hearing in school children. From this original work other conditions have been improved and brought to light by the pediatricians who have dealt with these same children[2].

The treatment, of which I am speaking, is effected by the use of a nasal applicator which was designed by Drs. Crowe and Burnam. It has attached to it 50 mg. of radium sulphate incapsulated in monel metal. This capsule is quite small and measures 15 mm. in length, has an inside diameter of 1.7 mm. and its wall has a thickness of 0.3 mm. This allows the beta rays to penetrate 3 mm. of tissue[3].

Each variety of cell in the human body has a specific range of radiosensitivity in the following order:

Lymphoid cells.
Epithelial cells.
Connective tissue cells.
Muscle cells.
Bone cells.
Fat cells.
Nerve cells.

The indications for use of radium in the nasopharynx are:

1. Blockage of the Eustachian tube by lymphoid tissue.

2. The presence of lymphoid tissue in the nasopharynx in conjunction with nasal allergy, postnasal discharge, frequent colds, and areotitis. The indications for radium therapy may be further established with improvement of the nasal condition by the use of antibiotics.

3. A small area of lymphoid tissue in the nasopharynx which harbors an infection to which the patient is sensitive when it becomes active.

The radium treatment is carried out after a preliminary shrinking of the nasal mucous membrane and the application of some mild topical anesthetic. The radium applicator is passed along the floor of the nose to the desired depth

Read before the Fulton County Medical Society, Atlanta, August 7, 1947.

and site of the adenoid tissue to be treated.

The radium applicator is allowed to stay in place for twelve minutes and then is transferred to the opposite side of the nose for the same period of time. The treatment is carried out at two to three weeks' intervals for three to four applications of radium. At times it is wise to remove the large mass of adenoids surgically to be followed by radium therapy. This eradicates the small remnants of adenoid tissue not possibly removed at the surgical procedure. With this method we can eliminate in six months the lymphoid tissue which may require 10 to 12 years for removal by natural atrophy. We have all heard of the patient who has outgrown asthma and adenoid hypertrophy, and we have seen asthma and allegric conditions benefitted by tonsillectomy and adenoidectomy only to be followed at a later date by the recurrence of the asthma, possibly due to hyperplasia of remnant adenoid tissue. When treated with radium the asthma may disappear again, and the lymphoid tissue does not return.

The effects of radium on adenoid tissue removed shows microscopically that the cells of the germinal centers are damaged. At first there is slight hypermia and congestion, and a few days after radiotherapy the lymph cells show chromatolysis and fragmentation of the nuclei. The normal existence of mature lymphocytes is a few weeks. Therefore, the lack of replacement of new cells and ultimate atrophy of the adenoid tissue takes place.

The clinical effects of the use of radium have been encouraging. I consider the patient's statement as to his condition of definite value, also the statements of the parents of children too young to complain or care.

In reviewing cases of otitis media with earache without discharging ears at any visit, there was more loss of conversational hearing than would be expected from audiometric tests. These cases had recurrent exacerbation of otitis media with pressure symptoms for a period of four months. There was overgrowth of lymph tissue at the Eustachian orifice in each case, even though they had had adenoidectomy. This tissue was reduced with three radium treatments. I have relied upon results in this age group of 6 to 8 years from the mothers' statements as well as the hearing tests. In two of these cases the hearing tests at school indicated as much as 40 per cent loss. Since their last treatment in July, 1946, these two children have not missed a day from school because of earache, and their hearing has been sufficiently improved for them to carry on their usual school work.

In addition to these two, this case history concerns a 12-year-old girl who was first brought to my office in January, 1947, with the complaints of deafness and frequent attacks of earache. She was noticeably nervous for a child of this age. The past history brought out that at the age of 2 she developed her first attack of otitis media following the measles. This was in 1937. In 1939, at the age of 4, she had her tonsils and adenoids removed. Following this the attacks of otitis media became less frequent and less severe until July, 1941, when she developed an acute upper respiratory infection. With this, she again started having attacks of otitis media which continued with increasing severity and with more loss of hearing until September, 1946, when it became necessary for her to wear a hearing aid in order to do her school work. In January, 1947, she was brought to my office, and the examinations showed great loss of hearing in both ears as well as evidence of chronic otitis media. Radium therapy was instituted, and her first treatment was given on January 21, 1947. On February 13, 1947 the second radium treatment had to be postponed because of acute otitis media. It was necessary to give penicillin injections. By the end of February the acute inflammation had subsided enough so that the second radium treatment could be given. Two weeks after the second radium treatment, the otitis media was much improved. In April, 1947, the fourth and last radium treatment was given. At this time hearing tests showed much improvement, and she was able to hear certain tones on the audiometer that she had previously been unable to hear. This past week the mother stated that the patient's last earache was February 20, 1947 and that the child was not finding it necessary to wear the hearing aid, except at the movies, because her conversational hearing was greatly improved. The clinical appearance of child's ears now suggests that there is no active inflammation of either middle ear.

I would not have you believe all cases of obstructive deafness improve, nor do all cases of otitis media become relieved by this therapy, but in closing I only ask that we continue to criticize this work as we go along, searching for some way to prevent deafness before the condition becomes irreversible.

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## TUBERCULOSIS

When two hundred consecutive autopsies were done in a general hospital which does not knowingly admit tuberculosis patients, 41 cases of tuberculosis of all types were found. Of the 41 cases, 41 died of causes other than tuberculosis, and the patients as well as the physician were completely unaware of the disease. In view of the high incidence of undetected tuberculosis, the conclusion is that no patient should be admitted to a general hospital without x-ray examination of the chest. A dePaula, Prensa Med. Argent., Abst., Am. Rev. Tbc., August, 1947.

*THE JOURNAL*

OF THE

MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

JANUARY, 1948

## RED CROSS BENEFICIARIES

The 1948 fund campaign of the American Red Cross reminds the public that "this year greater sums are needed for an equal job." To estimate a campaign goal takes a lot of figuring, based in part on statistics of the past, in part on unpredictable needs of the coming year, and, most important, on definite plans for community well-being.

In its steadily increasing emphasis on a peacetime program, the Red Cross is expanding its work for veterans and their dependents, while at the same time maintaining its traditional services to the armed forces and to civilians.

Red Cross beneficiaries in 1947 were legion. Nearly 100,000 persons received emergency help and rehabilitation following disasters of the past fiscal year. In the first 10 months of 1947 alone, Red Cross disaster relief appropriations were approximately $9,500,000. Financial assistance to veterans, servicemen, and their dependents totaled $11,944,365 for the year. Numberless persons were served by Volunteer Special Services workers, who gave 25,000,000 hours of their time.

Benefits from Red Cross services are two-way. Instruction in water safety and first aid not only provides skills that prevent many accidents from occurring to the individual but also provides a knowledge of what to do for others when accidents do occur. Since the Red Cross in 1914 began its program to "waterproof" America, the nation's drowning rate has been cut in half. Similarly, the 11,230,000 certificates issued since the first aid program was instituted in 1910 are impressive evidence of the number of beneficiaries of these services.

The National Blood Program when fully established will make whole blood and its derivatives available without cost to all people of our nation. Its beneficiaries carry in their very veins a token of neighborly service.

Events of the year 1948 are uncertain and unpredictable. Yet standing by, ready for any emergency, is the Red Cross with millions of organized workers to carry on its manifold services.

Remember, this year greater gifts are needed for an equal job!

**The Ninety-Eighth Annual Session of the Medical Association of Georgia will be held in Atlanta, April 27-30, 1948.**

## MAJORITY OF MEDICAL PRACTICE GROUPS ARE NOW PARTNERSHIPS

### *U. S. Public Health Service Survey Shows Nearly One Third Of All Such Groups Have Their Own Hospitals*

The great majority of medical practice groups in the United States consist of partnerships, according to results of a survey published in the December 6 issue of *The Journal of the American Medical Association.*

Prepared by G. Halsey Hunt, M.D., senior surgeon of the U. S. Public Health Service, and Marcus S. Goldstein, Ph.D., Washington, D. C., the report is based on returns from questionnaires mailed during the summer of 1946 by the United States Public Health Service to all medical groups listed by reliable sources. All those groups were then excluded which did not fall within the category of three or more physicians, practicing more than one specialty and pooling their various medical skills to work together as a group on a full time basis.

The 368 questionnaires which did fall within this category showed that:

—Over three-fourths of all the groups are partnerships, most of which also employ additional physicians; in almost 10 per cent one physician-owner practices with several employed physicians; and 8.4 per cent are groups in which all physicians are employed by a sponsoring organization. Cities of 100,000 or more contain 45 per cent of the groups in which all physicians are employed by a sponsoring organization, while only 19 per cent of the groups composed of partners plus employed physicians, the next in order of frequency, are found in cities of this size.

*Location and Size of Groups*

—Nearly half of the groups are found in the West North Central and East North

Central states. The West South Central states contain 16 per cent of the groups, the Pacific states 12 per cent and the Mountain states 11 per cent. The number of groups in the West Central Mountain and Pacific states is particularly high when compared with the population of these regions. In relation to population, medical groups are least common in the Middle Atlantic states. No groups were found in Maine, Rhode Island or Connecticut.

—Fifty-eight per cent of the 368 groups are located in cities of less than 25,000 population, and 82 per cent are found in communities of less than 100,000.

—Groups of three to five physicians make up 53 per cent of the total number, and 80 per cent have 10 or fewer physicians. The median size of all the groups is 4.7 full time physicians. Of the total 3,084 full time physicians in the 368 groups, 48.5 per cent are in groups of 10 or fewer members, 51.5 per cent with groups of 11 or more full time physicians. Comparing these figures with the result of a 1940 study by the American Medical Association, it seems probable that there has been a tendency toward increased size of groups during the past six years.

—Only 93, or 25 per cent, of the groups had part time physicians on their staffs.

—A definite tendency is noted for smaller groups to be found in the smaller cities and larger groups in the larger cities. However, 33 per cent of the groups with 11 or more full time physicians are located in communities of less than 25,000 population.

—The primary activity of the group was stated to be general medical care by 349 groups, and consultation or referral service by 19. Almost all the groups were providing medicine and surgery, with a decreasing number furnishing obstetrics, roentgenology, gynecology, pediatrics, otolaryngology, ophthalmology and dentistry. Of the nine major specialties listed, the average number furnished by all groups replying was 6.8.

—The services least often furnished by the smaller groups are ophthalmology, otolaryngology, x-ray and dentistry, although a substantial proportion of even the small groups included dentistry as one of its services.

—In response to the question as to whether the group has its "own hospital," 117 or 31.8 per cent of the groups replied affirmatively. The size of these hospitals ranged between 6 and 350 beds, with a median of 48 beds (average 72). A large proportion of the groups in the very small communities had their own hospital; e. g., 54 per cent of 59 groups in cities under 5,000 population and 32 per cent of 66 groups in cities of 5,000 to 10,000.

*Prepayment Plans in Group Practice*

—Only 56, or 15 per cent, of the groups operated a prepayment plan. The median size of the prepayment groups was 7.5 full time physicians, a considerably higher number than the median of 4.7 for all the groups.

—The Far West was especially well represented by groups with prepayment plans, 34 per cent of the groups in the Pacific states and 28 per cent in the Mountain states operating such plans. The large cities were also relatively well represented, for more than half (53 per cent) the medical groups in cities of 500,000 population or over, and more than one-third (34 per cent) in cities of 100,000 to 500,000, had prepayment plans. Some 45 per cent of the prepayment groups had their own hospitals.

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## MIXTURE OF SULFONAMIDE COMPOUNDS NOT RECOMMENDED IN MENINGITIS

A study made at the Gallinger Municipal Hospital, Washington, D. C., reveals that the advantages of using mixtures of sulfonamide compounds in the treatment of bacterial menin-

gitis are apparently outweighed by the disadvantages.

The authors of the study, published in the January 3 issue of *The Journal of the American Medical Association*, are William W. Zeller, M.D., Harold L. Hirsh, M.D., Lewis K. Sweet, M.D., and Harry F. Dowling, M.D., Washington, D. C., from the Infectious Disease Service and the George Washington Medical Division of Gallinger Municipal Hospital, and from the Departments of Pediatrics and Medicine of George Washington University.

Bacterial meningitis is an infectious disease in which the meninges, the three membranes that envelop the brain and spinal cord, are inflamed. It takes a number of different forms, depending on the type of organism causing the infection. Previous studies have shown that the case-fatality rate in this disease could be lowered to approximately 10 per cent with the use of either sulfadiazine or sulfamerazine, but it was felt that it might be possible to reduce fatalities still further if larger doses could be safely administered. Larger doses of either drug alone proved very toxic.

Beginning in October 1944, a mixture of the two drugs (which represented a 25 to 33 per cent increase over the single doses previously employed) was therefore tried on 135 patients admitted to Gallinger Municipal Hospital with the diagnosis of bacterial meningitis.

Comparing the results with those obtained in 186 patients who had received either sulfadiazine or sulfamerazine alone, the doctors found that the incidence of fever, rash and conjunctivitis (inflammation of the delicate membrane that lines the eyelids) attributed to the use of the mixture of sulfadiazine and sulfamerazine was 15.7 per cent, an increase over the incidence obtained when the drugs were used alone.

## NEW PHARMACEUTICAL MEDICAL RESEARCH FOUNDATION FORMED

The recently formed Pharmaceutical-Medical Research Foundation, according to an editorial in the January 3 issue of *The Journal of the American Medical Association*, plans to make extensive studies relating to the chemical and physical changes that occur in tissues and to the physiology of the body—particularly concerning substances taken into the body and their ultimate fate.

The editorial follows:

"When the American Pharmaceutical Manufacturers' Association awarded its plaque to the American Medical Association on December 16, the occasion was signalized by an announcement of the formation of a new foundation to be supported in major part by the pharmaceutical industry, to be devoted to scientific research and to represent a joint effort of the pharmaceutical and medical professions. This foundation, to be called the Pharmaceutical-Medical Research Foundation, is to be modeled after the Nutrition Foundation, which already has a record of important contributions to the advancement of knowledge in that field. The Nutrition Foundation was developed largely through the interest of Charles Wesley Dunn, general counsel for the American Pharmaceutical Manufacturers' Association.

"While many millions of dollars are spent annually in the United States on research of a practical and applied character, the comparative amounts expended on basic research are infinitesimal. Before controlling many of the diseases which still baffle medical science, extensive studies are required related to the chemical and physical changes that occur in tissues and to the physiology of the body—particularly concerning substances taken into the body and their ultimate fate. What part do childhood infections, nutritional deficiencies, fatigue and mental stresses play in the development of the degenerative disease? These questions and many hundreds like them require positive answers. From such answers will come specific methods of diagnosis, prevention and treatment, which will mean increasing years of health and happiness for more and more persons.

"A committee, including representatives of the pharmaceutical industry and the medical profession, was organized to establish the new foundation. The representatives from the pharmaceutical industry are S. DeWitt Clough, chairman of the board, Abbott Laboratories, Chicago; A. H. Fiske, vice president, Eli Lilly & Company, Indianapolis; Elmer H. Bobst, president, William R. Warner & Co., Inc., New York; John L. Smith, president, Chas. Pfizer & Co., Inc., Brooklyn; S. Barksdale Penick, Jr., president, S. B. Penick & Co., New York; M. C. Eaton, president, Eaton Laboratories, Inc., Norwich, N. Y., and Charles Wesley Dunn, New York, general counsel for the American Pharmaceutical Manufacturers' Association.

"The representatives from the medical profession are the following officers of the American Medical Association: Dr. R. L. Sensenich, South Bend, Ind., president-elect; Dr. E. L. Henderson, Louisville, Ky., chairman of the board of trustees; Dr. Ernest E. Irons, Chicago, secretary of the board of trustees; Dr. Morris Fishbein, Chicago, editor of *The Journal*, and Dr. Austin Smith, Chicago, secretary of the Council on Pharmacy and Chemistry. Dr. Sensenich is chairman of the committee.

"The foundation will be a wholly public institution in purpose, conduct and service; its governing board will include distinguished representatives of the pharmaceutical industry and medical profession. The board will determine its program of scientific research, on the basis of a recommendation by an authoritative scientific advisory committee and the advice of an eminent scientific director. Much of the initial

basic research sponsored by the foundation will be in the field of the degenerative diseases, where there is urgent need."

## STUDY QUESTIONS GERMICIDAL EFFECT OF CERTAIN MERCURY COMPOUNDS

Doubt as to whether the use of mercury compounds in their commercial concentrations is justified by their actual antiseptic effects is expressed in a study by three Philadelphia bacteriologists, reported in the January 3 issue of *The Journal of the American Medical Association*. Experiments on mice by the three men showed that bacterial cultures exposed for 10 or even 15 minutes to "mercurochrome," "merthiolate" and "metaphen" could still produce fatal disease.

The three scientists, Harry E. Morton, Sc.D., Leon L. North, Jr., M.D., and Frank B. Engley, Jr., M.S., Philadelphia, all from the Department of Bacteriology of the University of Pennsylvania School of Medicine, were aided in their study by a grant from the Council on Pharmacy and Chemistry of the American Medical Association.

The organism selected for their study was Streptococcus pyogenes, which produces disease in man as well as in laboratory animals. A culture of the bacteria was mixed with each of the germicides in their marketed solutions and, after an interval, injected into a number of mice. Nearly all the mice died, and presence of the organisms was demonstrated in their heart's blood after death. Of the three, "metaphen" seemed to have had the most powerful germicidal effect, as registered by the proportion of mice which survived.

"Whether other infectious agents would differ and lose their virulence when exposed to mercury may well be investigated," the Council on Pharmacy and Chemistry suggests. "Actually, in other experiments in the same laboratory it has been found that the infection of laboratory animals by influenza virus may be prevented by their exposure to mercurochrome, merodicein, metaphen and phenyl mercuric nitrate; merthiolate was ineffective. Others have reported the effectiveness of mercurochrome, in inactivating in vitro the virus of poliomyelitis. The field of usefulness of organic mercurials should be explored, proved and defined. The proponents of these preparations should proceed seriously and diligently to this task. The Council wishes to give the necessary opportunity to meet the challenge, but it should not be deferred indefinitely. It is a field in which wishful thinking is dangerous."

## STUDY PRODUCES NEW EVIDENCE ABOUT TRANSMISSION OF POLIO

Important new evidence concerning the transmission of poliomyelitis by personal contact is presented by four investigators in the December 6 issue of *The Journal of the American Medical Association*. The investigators are F. B. Gordon, M.D., and Frank M. Schabel, Jr., S.B., from the Department of Bacteriology and Parasitology of the University of Chicago; Albert E. Casey, M.D., from the Birmingham Baptist Hospital in Alabama, and William I. Fishbein, M.D., from the Chicago Health Department. Their work was done with the cooperation of Herman N. Bundesen, M.D., and the technical assistance of Margaret Abendroth, A.B., Chicago.

For some time it has been generally agreed that poliomyelitis is infectious only during a period that begins a few days before and ends a few days after the development of symptoms. Studies have also shown that the polio virus is usually found in the throat for only a short time after illness begins, but up to now much of the necessary evidence was lacking to establish a relationship between the period of infectiousness and the period when the virus is found in the throat. In only two cases had tests been made for virus in the throat *before* the development of the illness.

Material for more such tests was finally collected during a polio epidemic in Chicago during the summers of 1945 and 1946. Hundreds of apparently healthy children in the afflicted neighborhoods were visited, among them a number who had had contact with the sick children before their illness. During daily visits throat and mouth swabs were taken both from the contacts and the non-contacts. As expected, poliomyelitis eventually developed in three of the children who had had contact with polio cases, and a similar study revealed a fourth such case. The mouth and throat swabbings taken from all four patients a short time before they became ill were then tested for the virus, and specimens from three of them produced polio in monkeys. Specimens prepared from the throat and mouth swabbings of a non-contact and of controls proved harmless.

"The laboratory studies make a strong case for virus from the pharynx as a common source of infection," the investigators write.

## CHILD EATS COLORED CRAYONS, ALMOST DIES OF ANILINE DYE POISONING

Children and dogs often eat strange things, among them wax crayons, without apparent harm. But, warns Esther B. Clark, M.D., pediatrician at the Palo Alto Clinic in California, certain colors of crayons may be not only unpalatable but dangerous and even fatal.

In the December 6 issue of *The Journal of the American Medical Association* she reports the case of a 28-month-old boy who was almost fatally poisoned by eating orange and yellow wax crayons. The poison was created by the use of para red in the coloring matter, which was converted into an aniline dye in the body.

Some hours after the boy had eaten an orange crayon his parents noticed that his hands were blue, but thought it was paint. At school the next day he almost finished a yellow crayon before his teacher caught him, noticed his extreme blue color, and decided he was having a heart attack. The boy rapidly grew worse until all of the crayon was apparently removed from his stomach, and oxygen therapy and a blood transfusion brought about complete recovery.

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## DIPHTHERIA—A PROBLEM IN GEORGIA

In discussing a subject such as diphtheria one does so at the risk of being repetitious, since I am sure that there are few diseases in which the diagnosis is made with such a high degree of accuracy by the practicing physician. This paper then will intentionally neglect to set forth the various diagnostic criteria, both clinical and laboratory, with which we are all too familiar, and will deal with the aspects of prevention and therapy.

Many glowing reports can be read of the remarkable decrease in morbidity and mortality of the disease in this country. This has largely occurred since measures for active immunization and antitoxin therapy have come into widespread use. A further factor in the decline in morbidity is the apparent tendency of carrier strains to cause a higher proportion of subclinical infections resulting in immunity.

Yet, although it is comforting to look at the credit side of the ledger, it is still not too bright on the debit side. It has been shown in continental Europe and England that there is apparently a highly virulent type of organism causing a higher morbidity and mortality rate than the disease as we know it here. It is not beyond the realm of possibility that diphtheria may assume the more virulent characteristics here in this country in the not too distant future. Moreover, a quick look at the amount of diphtheria still present in Georgia reveals that we have experienced many needless cases and deaths in spite of adequate control measures at our fingertips.

Following are a few figures which demonstrate the trend of diphtheria from 1932 to 1946 inclusive as reported in the State of Georgia:

TABLE 1

*Diphtheria: Incidence and Deaths in Georgia*

| Year | Number of Cases | Number of Deaths |
|---|---|---|
| 1932 | 1321 | 169 |
| 1933 | 1413 | 187 |
| 1934 | 1107 | 188 |
| 1935 | 1050 | 161 |
| 1936 | 1100 | 123 |
| 1937 | 917 | 108 |
| 1938 | 1233 | 106 |
| 1939 | 1112 | 95 |
| 1940 | 552 | 59 |
| 1941 | 758 | 63 |
| 1942 | 660 | 55 |
| 1943 | 520 | 47 |
| 1944 | 462 | 40 |
| 1945 | 695 | 71 |
| 1946 | 371 | 45 |
| Total | 13271 | 1517 |

It is interesting to look at the comparative number of cases in the large urban centers and the various suburban and rural areas in the State. The six large urban counties of Fulton, DeKalb, Bibb, Chatham, Muscogee and Richmond account for 31.54 per cent of cases and 21.68 per cent of the deaths. Exclusive of these, the counties which have had 100 cases or more during the 15-year period are largely in the northern portion of the State. These 28 counties which are listed account for 33.73 per cent of the cases and 28.08 per cent of the deaths: Bartow, Bulloch, Burke, Chattooga, Cherokee, Clarke, Cobb, Colquitt, Dodge, Floyd, Forsyth, Franklin, Gordon, Gwinnett, Hall, Henry, Jackson, Laurens, Newton, Pickens, Polk, Spalding, Troup, Walker, Walton, White and Whitfield. So it is readily apparent that of the 159 counties in Georgia, 6 urban and 28 suburban and rural (containing cities of less than 50,000 population) account for 65.27 per cent of the cases and 49.76 per cent of the deaths due to diphtheria.

### *Active Immunization*

In view of these facts presented merely to punctuate our contention that diphtheria still constitutes a problem, it was thought worthwhile to review the status of immunization at the present time. We would like also to summarize the various schedules of immunization and therapy in the hope that we can reduce the threat of diphtheria in our State.

At the present time, as a result of field studies conducted by a committee of the American Public Health Association, the following immunization schedules are recommended: Volk and Bunney[1] obtained the best antigenic response with alum-precipitated-toxoid given in doses of 0.5 cc. at 3 weeks intervals. In support of this, Chesney[2] obtained 99.6 per cent reversion to Schick negativity in 1,555 children using a 4 weeks interval, the Schick test being done 2 months after the second dose.

An alternate method, but not considered as efficacious is the use of fluid toxoid, three doses at 3 weeks' intervals, advocated by Fraser and Halpern[3].

The American Public Health Association[4] feels that immunization should be concluded by the sixth month of life, but many prefer to wait until the child has attained the age of 9 months. The trend is toward early immunization in most diseases. The Georgia Department of Public Health summarizes the various thoughts on the matter in a Schedule of Immunizations now in

publication, as follows:

Between the ages of 7-9 months the child should receive 2 doses of alum-precipitated toxoid at monthly intervals and should receive a booster dose at the end of 2 years, and re-immunization on entering school.

When an older child who has received no previous immunization is a candidate, by reason of exposure or for any other reason, it is wise to perform a Maloney test prior to immunization, in order to obviate any sensitivity reaction. This, of course, applies to adults also. The test is performed by the injection intradermally of 0.1 cc. of 1:20 dilution of plain toxoid. If there is no local reaction in 24-48 hours, then it is considered safe to give the immunization. Reaction will vary from local redness to an occasional generalized reaction accompanied by chills, fever, headache and vomiting.

In these reactors a schedule of graduated small doses of diluted toxoid is recommended, or the use of one of the other preparations such as toxoid-antitoxin-floccules, toxin-antitoxin, or protamine diphtheria toxoid.

In the early days of immunization it was thought that once immunized, there would be a persistence of protection for years. However, this is now known not to be true, and that protection is gradually lost. Six months after the immunizing series of injections has been completed it is recommended to Schick test the individual and re-inoculate if a satisfactory response has not been obtained. Some authors also recommend "booster" injections periodically to maintain immunity until the danger of infection is passed. (See recommendations of Department of Public Health above).

### *Passive Immunization*

Much dispute exists concerning prophylaxis with diphtheria antitoxin in an exposed case. The arguments against this procedure center mainly around the danger of producing serum sensitivity in an individual who may, in spite of the prophylaxis, have the clinical illness when the effect of the small dose of antiserum is over. Not only may sensitivity to horse serum be produced, but subsequent administration is reduced in its effectiveness because of the mechanism of the body to get rid of foreign substances. The time lost in desensitizing a patient in need of the antitoxin in order to give him a now less effective agent may mean his life. Also the administration of the prophylaxis may contribute to false security on the part of the family and the physician, delaying appropriate therapy if needed.

Although it has been suggested that non-immune contacts under 5 years of age receive prophylactic antiserum without prior Schick testing, it is felt that this practice should be reserved for those individuals in whom the danger of even mild diphtheria is great, such as children with rheumatic fever or congenital heart disease, etc.

### *Therapy With Antitoxin*

Therapy in diphtheria has been simplified by the use of antitoxin, and has probably done as much to reduce the mortality from this disease as our newer bacteriostatic and bacteriocidal agents have in some of the other infectious diseases. We will not consider in this title the various indications for intubation or tracheotomy or of the use of adjuncts such a croup-tents, oxygen, etc., but merely consider the various dosages of antitoxin which have been recommended. It is, I am sure, unnecessary to point out the difference between toxoid and antitoxin, but an occasional case comes to the attention of this office in which toxoid was used in the treatment of the acute case where antitoxin was indicated.

Diphtheria antitoxin should be administered as *early as possible* when diphtheria is suspected, even when the diagnosis is not yet proven. It is important to neutralize the toxin before it has caused serious damage to the cells. Once the toxin has united with the cells no neutralization is possible. The antitoxin is more *quickly* effective when given intravenously, but there is danger of a greater sensitivity reaction. The dosage may be varied according to severity of the symptoms *but not with respect to the age,* since mortality is higher in the younger children.

It cannot be emphasized too greatly the importance of adequate doses, early in the disease. Many feel that a dose of less than 20,000 units should not be given in any case, and it is universally agreed that too large a dose will do no harm but too small a dose may be a disastrous error. Doses should run as high as 40,000 units in severe cases and up to 100,000 units in malignant cases.

It is hoped that this review will stimulate the physician to redouble his efforts in prevention in order to reduce the incidence of diphtheria to a level which would virtually eliminate the threat to the present and future generations of children.

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*Assistant Epidemiologist*
*Georgia Department of Public Health*

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*The* JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

# WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

## AUXILIARY NEWS

Informative and interesting addresses by national and state presidents of the Woman's Medical Auxiliary, and by the president-elect of the Medical Association of Georgia, highlighted the meeting of the Woman's Auxiliary to the Third District Medical Society, held recently at the Woman's Club House, Columbus.

Following the program, a beautiful tea was held in the Bradley room, honoring visiting officers and members.

Mrs. Eustace Allen, of Atlanta, national president of the Woman's Auxiliary, in her address, praised the forward strides taken by the local auxiliary, not only here but throughout the district and the State. Mrs. Allen also emphasized the importance of doctors' wives in public relations, stating that a doctor's wife is naturally in the best position to educate laymen in health and all medical phases, both old and new.

Mrs. Allen related stories of her travels thorughout the nation attending similar meetings and told the duties of her office.

"Some Phases of the Woman's Auxiliary Role in Health Education" was the title of the talk given by Dr. Edgar Greene, of Atlanta, president-elect of the Medical Association of Georgia. Dr. Greene explained the various mediums through which doctor's wives could educate the general public on health. Among those he emphasized were visual education, the press and the radio, and qualified and able speakers. He urged that all auxiliary members keep in touch with medicine and use their influence and knowledge to teach preventive medicine and in this way raise health standards.

Mrs. Sam Anderson, of Milledgeville, incoming State auxiliary president, spoke to the members, asking for their cooperation in next year's work, and Mrs. W. G. Elliott, of Cuthbert, president, urged a continued drive for membership. Mrs. Elliott also announced that "Unity and Growth" had been chosen as the theme of the Auxiliary for the coming year.

The meeting was presided over by Mrs. Albert Bush, of Hawkinsville, district manager, and Mrs. Albert Sims, of Richland, district secretary. Mrs. W. L. Cooke gave the opening prayer. Mrs. F. B. Schley gave the address of welcome, and Mrs. Steve Kenyon of Dawson, offered the response.

Dr. William C. Cook spoke to the members on "Helping the Doctor Play," emphasizing that doctors should have a normal amount of relaxation in order to maintain their state of well-being, physically and mentally.

It was announced by the nominating committee that Mrs. Schley Gatewood, of Americus, was elected district manager; Mrs. A. R. Sims, of Richland, manager-elect; and Mrs. F. D. Edwards, of Columbus, district secretary. Mrs. Allen installed the newly-elected officers.

Preceding the tea, Mrs. John Boyd presented several musical selections, accompanied at the piano by Mrs. Chester Newman. Local society officers on hand to be hosts were Mrs. Luther Wolf, president; Mrs Bert Tillery, vice president; Mrs. W. L. Cooke, secretary; and Mrs. Jamie McDuffie, treasurer.

For the tea in the Bradley room, the table was centered with a silver epergne holding tube roses and white shaggy chrysanthemums. At either end of the tea and coffee services, presiding were Mrs. G. S. Murray and Mrs. W. L. Cooke. Assisting in entertaining, besides the officers, were Mrs. W. C. Cook, Mrs. Hugh Bickerstaff, Mrs. J. N. Willis, and Mrs. John Thompson.

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The Muscogee County Medical Society entertained at a cocktail party and banquet in the evening at Cherokee Lodge, honoring visiting doctors and their wives, who were in Columbus to attend the Third District Medical Society meeting earlier in the afternoon.

The table, placed in the shape of an E, was covered with a white cloth and centered with arrangements of big yellow chrysanthemums, pine cones, and pine boughs. Running lengthwise the table were pine boughs interspersed with daisy chrysanthemums and green grapes. Individual places were marked with yellow cards tied with real pine cones. Yellow monogrammed napkins completed the appointments. Green and red berries were used on the mantels.

Receiving guests, along with other members of the Medical Society, were Dr. Arthur Berry, president, and Mrs. Berry; Dr. Clarence Butler, secretary, and Mrs. Butler; Dr. Guy Dillard, treasurer, and Mrs. Dillard; Dr. Franklin Edwards, in-coming president, and Mrs. Edwards.

In charge of the party were Mesdames John Mayher, Will Mayher, Franklin Edwards, W. R. Snelling, and Arthur Berry.

Covers were laid for 150 visiting doctors and their wives, guest speakers, and members of the Muscogee County Medical Society and their wives.

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The Eighth District Auxiliary meeting was entertained recently at a tea given by the doctors' wives of Valdosta at the Daniel Ashley Hotel. Mrs. Sage Harper, president, introduced Mrs. Sam Anderson, president-elect of the Woman's Auxiliary to the Medical Association of Georgia, who spoke on "The Importance of Auxiliary Objectives" and "Husbands' Helper for Medical Ethics." Miss Glenn Hill gave musical numbers, accompanied by Miss Raimende Aubry. After the meeting the ladies joined their husbands for a banquet at the Valdosta Country Club.

Baldwin County Auxiliary met at the home of Mrs. T. C. Clodfelter, Milledgeville, and interesting papers of historical interest on older doctors of Baldwin County were presented to Mrs. Edwin Allen, president, by Mrs. Richardson. Dr. Edwin Allen gave an informative review of shock therapy in the treatment of psychoses.

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Carroll-Douglas-Haralson Auxiliary had a luncheon meeting at the home of Mrs. D. S. Reese, Carrollton. A paper on "Visual Education" was read by Mrs. S. F. Scales, and "Objectives of the Year" by Mrs. Reese. Mrs. C. V. Vansant, Douglasville, was welcomed as a new member.

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Chatham County Auxiliary met with Mrs. R. L. Neville in Savannah. Co-hostesses were Mesdames Lee Howard, C. R. A. Redmond, E. Carson Demmond, C. T. Upson and H. Y. Righton. Mrs. R. A. Peterson, president, announced that Mrs. G. Hugo Johnson had resigned as first vice president, and the Executive Board had elected Mrs. C. O. Henderson to the office.

The following doctors were appointed to the Advisory Committee: Lee Howard, C. A. Henderson, John L. Elliott and Emerson Ham. Mrs. Ross Cummins, director of Vocational Guidance Center, Amrstrong Junior College, spoke on "Community Psychological Services."

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Randolph-Terrell Counties Auxiliary met with Mrs. J. C. Patterson in Cuthbert. Reports of the State Convention held in Augusta were given, and of the State Conference and meeting with the Advisory Committee of the Medical Association of Georgia in Atlanta. Mrs. Robert Quattlebaum, of Fort Gaines, was welcomed into the Auxiliary.

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Ware County Auxiliary met with Mrs. B. R. Bussell, Waycross, with Mrs. D. M. Bradley as co-hostess.

The president, Mrs. J. R. Gay, spoke on "The Aims and Objectives of the Auxiliary, and its purpose in upholding the ideals and standards of the medical profession."

Mrs. A .W. DeLoach reported 29 additional books had been added to the patients' library at the Ware County Hospital. Mrs. W. C. Calhoun was appointed chairman of the hospital project.

Committees appointed were: Research in Romance of Medicine, Mrs. W. M. Folks, Mrs. J. E. Penland, Mrs. B. R. Bussell; Health Education and Public Relations, Mrs. Leo Smith, Mrs. J. E. Penland, Mrs. W. P. Stover; Hygeia, Mrs. B. E. Collins, Mrs. D. M. Bradley; Press and Publicity, Mrs. H. A. Seaman, Mrs. A. W. DeLoach, Mrs. K. McCullough, Mrs. B. H. Minchew; Doctors' Day, Mrs. C. A. Witmer, Mrs. W. F. Reavis, Mrs. E. R. Stamps; Scrapbook, Mrs. W. L. Pomeroy, Mrs. W. C. Hafford; Exhibits, Mrs. W. M. Flanagan, Mrs. T. J. Ferrell, Mrs. W. C. Calhoun; Radio, Mrs. L. W. Pierce, Mrs. L. H. Adeu; Legislation, Mrs. H. B. Minchew, Mrs. W. F. Reavis, Mrs. W. L. Pomeroy. Mrs. H. T. Adkins was welcomed as a new member.

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## COUNTIES REPORTING FOR 1948

***Brooks County Medical Society***
President—A. B. Jones, Jr., Quitman
Vice-President—L. A. Smith, Quitman
Secretary-Treasurer—Harry A. Wasden, Quitman
Delegate—A. B. Jones, Jr., Quitman
Alternate Delegate—L. A. Smith, Quitman
Censors: A. B. Jones, Jr., and L. A. Smith

***Burke County Medical Society***
President—W. C. McCarver, Vidette
Vice-President—W. R. Lowe, Midville
Secretary-Treasurer—C. G. Green, Waynesboro

***Emanuel County Medical Society***
President—S. S. Youmans, Swainsboro
Vice-President—R. G. Brown, Swainsboro
Secretary-Treasurer—H. W. Smith, Swainsboro
Delegate—C. E. Powell, Swainsboro
Alternate Delegate—R. G. Brown, Swainsboro
Censors: S. S. Youmans, R. G. Brown, and C. E. Powell

***Habersham County Medical Society***
President—B. J. Roberts, Cornelia
Vice-President—T. H. Brabson, Cornelia
Secretary-Treasnrer—Joe J. Arrendale, Cornelia
Delegate—C. T. Hardman, Tallulah Falls
Alternate Delegate—D. H. Garrison, Clarkesville
Censors: J. L. Walker, and J. B. Jackson

***Houston-Peach Medical Society***
Secretary-Treasurer—A. G. Hendrick, Perry
Delegate—A. Smoak Marshall, Fort Valley

***Jenkins County Medical Society***
President—A. P. Mulkey, Millen
Vice-President—C. R. Williams, Wadley
Secretary-Treasurer—Katrine Rawls, Sylvania

***Monroe County Melical Society***
President—George H. Alexander, Forsyth
Vice-President—W. J. Smith, Forsyth
Secretary-Treasurer—A. W. Bramblett, Jr., Forsyth
Delegate—George H. Alexander, Forsyth

***Montgomery County Medical Society***
Secretary-Treasurer—J. W. Palmer, Ailey
Delegate—J. W. Palmer, Ailey

***Rockdale County Medical Society***
Secretary-Treasurer—Harvey E. Griggs, Conyers
Delegate—Harvey E. Griggs, Conyers

***Tattnall County Medical Society***
President—J. M. Hnghes, Glennville
Vice-President—L. V. Strickland, Cobbtown
Secretary-Treasurer—W. C. McCarver, Jr., Glennville
Delegate—A. G. Pinkston, Glennville
Censors: A. G. Pinkston, A. C. Colson, and L. R. Jelks

***Telfair County Medical Society***
President—D. B. McRae, McRae
Vice-President—C. J. Maloy, McRae
Secretary-Treasurer—F. R. Mann, McRae
Delegate—S. T. Parkerson, McRae
Censors: W. H. Born, S. T. Parkerson, and C. J. Maloy

***Tift County Medical Society***
President—Ella Andrews, Tifton
Vice-President—M. L. Webb, Tifton
Secretary-Treasurer—Richard K. Winston, Tifton
Delegate—R. E. Jones, Tifton
Alternate Delegate—Richard K. Winston, Tifton

***Tri-County Medical Society***
(Calhoun-Early-Miller Counties)
President—James W. Merritt, Colquitt
Vice-President—W. C. Baxley, Blakely
Secretary-Treasurer—J. G. Standifer, Blakely

Delegate—J. G. Standifer, Blakely
Alternate Delegate—James W. Merritt, Colquitt

***Walton County Medical Society***

President—Philip R. Stewart, Monroe
Vice-Presdent—Ernest Thompson, Monroe
Secretary-Treasurer—Samuel J. DeFreese
Delegate—Homer Head, Monroe
Alternate Delegate—Samuel J. DeFreese, Monroe

***Ware County Medical Society***

President—Braswell E. Collins, Waycross
Vice-President—Harold W. Muecke, Waycross
Secretary-Treasurer—Lovick W. Pierce, Waycross
Delegate—W. F. Reavis, Waycross
Alternate Delegate—W. L. Pomeroy, Waycross
Censors: W. M. Flanagan, H. Ansley Seaman, and W. A. Hendry.

## NEWS ITEMS

The Atlanta Graduate Medical Assembly was held at the Biltmore Hotel, Atlanta, January 27-30. The following subjects were discussed by outstanding physicians from all parts of the United States: Medicine, Surgery, Arthritis, Pathology, Hematology, Anesthesiology, Tuberculosis, Otolaryngology, Psychiatry, Pediatrics, Radiology, Gynecology, and Nutrition.

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The Bibb County Medical Society dinner meeting was held at the New Yorker Cafe, Macon, January 6. Program: "Electroencephalography" by Dr. William A. Smith, Atlanta. Dr. A. M. Phillips, secretary.

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Dr. R. W. Alles, Detroit, president of the American College of Surgeons, announces the scheduling of six sectional meetings in 1948 for fellows of the college, the medical profession at large and hospital personnel. Each meeting will be two days in length and will include conferences for hospital personnel as well as sessions for the medical profession. Panel discussions on scientific subjects, led by internationally known authorities in each field of surgery, will be held each morning and afternoon. The list of meetings included Atlanta at the Ansley Hotel, January 26 and 27.

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Dr. N. F. Arnold, formerly of Macon, announces the opening of his office at Hawkinsville for the practice of medicine. The office was formerly occupied by the late Dr. A. P. Evans, on Broad Street, Hawkinsville.

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Dr. Clarence L. Ayers, Toccoa, was recently accorded one of the greatest honors ever to come to a resident of Northeast Georgia, when the Toccoa Kiwanis Club went on record as nominating Dr. Ayers, because he measures up to the pattern of the physician who has served his people as a family doctor, and who does not devote himself to a specialty in medicine. The Board of Trustees of the American Medical Association has established a gold medal award for a general practitioner who has rendered exceptional service to his community. Realizing that Dr. Ayers comes within this category the members of the Toccoa Kiwanis Club were unanimous in submitting the name of Dr. Ayers to the American Medical Association Committee on Award of Distinguished Service Medal for the General Practitioner.

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The Bartow County Medical Society held its meeting at the office of Dr. Wm. B. Quillian, Jr., Howell-Quillian Clinic, Cartersville, December 2. Dr. George Cauble, a resident of Cartersville since August and associated with Howell-Quillian Clinic, was elected to membership and to represent the society at the annual session of the Medical Assocation of Georgia, Atlanta, April 27-30, 1948. Officers for 1948 are: Dr. W. Earl Wofford, president, Dr. Wm. B. Quillian, Jr., vice-president, Dr. A. L. Horton, secretary-treasurer, Dr. George Cauble, delegate. Censors: Dr. Harry B. Bradford, Dr. Wm. B. Quillian, Jr., and Dr. S. M. Howell.

Dr. R. V. Brandon, McDonough, announces the closing of his office in Locust Grove. He will spend all his time in his McDonough office.

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Dr. Henry A. Bridges, a native of Brinson, announces the opening of his offices for the general practice of medicine in the Custer Building, Bainbridge. Dr. Bridges graduated from the University of Georgia School of Medicine, Augusta, and served in the Army Medical Corps for two years. He was stationed at the Oliver General Hospital, Augusta, and Army and Navy General Hospital, Hot Springs, Ark.

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Dr. Bruce D. Burleigh, Marietta, announces the closure of his office on Cherokee Street. He is continuing general practice at his old office, 515 Clay Street, Marietta.

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Dr. Earl B. Benson, Marietta, announces the removal of his office to 304 Cherokee Street, Marietta.

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The Crawford W. Long Memorial Hospital, Atlanta, staff dinner meeting was held in the dining room of the hospital, December 9. The program consisted of the following: "An Unusual Ether Reaction in the Delivery Room" by Dr. W. W. Daniel. The annual election of officers. Medical section meeting was held in the medical library. Round table symposium, "Diseases of the Small and Large Intestines" led by Dr. Crawford Barnett. Surgical section met in the clinic reception room. Pediatric section meeting was held in the clinic lecture room.

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Dr. W. B. Dean, formerly of Macon, announces the opening of his office in Unadilla, where he is practicing medicine. Dr. Dean served in the U. S. Armed Forces for a period of five years.

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The Carroll-Douglas-Haralson Counties Medical Society held its monthly meeting at the Hotel Carrollton, Carrollton, December 1. Officers for 1948 are: Dr. D. S. Reese, Carrollton, president, Dr. R. E. Hamilton, Douglasville, vice-president, Dr. O. D. King, Bremen, vice-president, Dr. Wm. P. Downey, Tallapoosa, secretary-treasurer, and Dr. S. F. Scales, Carrollton, delegate to the annual session of the Medical Association of Georgia, which will be held in Atlanta next April.

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The Dougherty County Medical Society and the medical staff of Phoebe Putney Hospital held a joint meeting at the hospital, Albany, December 11. The members of the Albany-Dougherty County Hospital Authority were hosts to the medical society members at dinner. Officers for 1948 for the Dougherty County Medical Society are: Dr. A. E. James, president, Dr. G. E. Seymour, vice-president, Dr. P. T. Russell, secretary-treasurer. For the hospital medical staff the following officers were elected: Dr. F. K. Neill, president; Dr. P. L. Hilsman, vice-president; Dr. A. E. James, secretary-treasurer; Dr. F. K. Neill, chief of the surgical service; Dr. J. A. Redfearn, chief of the medical service; Dr. J. P. Tye, chief of obstetric service; Dr. Frank Thomas, chief of the pediatric service; Dr. J. C. Keaton, chief of the urologic service, and Dr. I. W. Irvin, chief of eye, ear, nose and throat service.

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The Eighth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, was held at the Cleveland Auditorium, Cleveland, Ohio, January 5 and 6. Dr. Carl M. Peterson, Chicago, secretary.

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Dr. Murdock Equen, Atlanta, was elected to the presidency of the eye, ear, nose and throat section of the Southern Medical Association at the association's recent meeting in Baltimore. Dr. Equen's tenure begins Jan. 1, 1949, the specialists electing their officers a year in advance to give them time to make preparation to meet the demands of their official duties. Dr.

Shaler Richardson, Jacksonville, Fla., will serve as president in 1948. Dr. Calhoun McDougall, Atlanta, is retiring president of the section. The Southern Medical Association, comprising 7,000 physicians and surgeons, is the second largest medical group in the world, ranking next to the American Medical Association. There were 3,500 physicians attending the Baltimore meeting.

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The Georgia Medical Society held its monthly meeting at the society's hall, 612 Drayton Street, Savannah, December 9. The following officers were elected for 1948: Dr. Monroe J. Epting, president; Dr. John L. Elliott, president-elect; Dr. Lawrence B. Dunn, vice-president; Dr. Stephen H. Lange, secretary-treasurer. The report of the nominating committee was made by Dr. M. J. Egan.

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Dr. Emerson Ham, Savannah, child health authority, recently gave a lecture and demonstration on health inspections for children at the weekly staff nurses' conference at the City-County Health Center, Savannah. Dr. Ham explained and illustrated the important points nurses should observe in making health inspections of infants, pre-school children, and school children. The instructions are expected to improve the efficiency of the public health nurses in their work with mothers and children in the homes, health stations, and schools. Children appearing to be abnormal in any way are referred by the nurses to private physicians.

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The Georgia Baptist Hospital Medical Staff dinner meeting was held in the Nurses' Home dining room, Atlanta, December 16. Dr. A. M. Dimmock, secretary.

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Dr. Charles M. Holman, native Albanian, announces his association with Dr. James P. Tye, 220½ Broad Avenue, Albany, for the practice of medicine. Dr. Holman graduated from Emory University School of Medicine, Atlanta, and served during World War II as Medical Train Commander with a hospital train detachment. Upon his release from military service he spent four months at the Steiner Cancer Clinic, Atlanta, and served as assistant resident obstetrician and gynecologist at Grady Memorial Hospital, Atlanta.

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Dr. Marion Hurt, formerly of Mayfield, Ky., recently joined the medical staff of Rawlings Hospital, Sandersville. Dr. Hurt is a graduate of Tulane University of Louisiana School of Medicine, New Orleans, and interned at Erlanger Hospital, Chattanooga, Tenn. He spent 30 months in the Army Medical Corps, serving in the United States, England, France and Germany, and was discharged a captain.

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Dr. Jabez Jones, Savannah, was recently elected president of the Seaboard Air Line Railroad Surgeons, at their annual convention held in Miami. Other officers are: Dr. Leland F. Carlton, Tampa, Fla., first vice-president; Dr. W. A. Boyd, Columbia, S. C., second vice-president; Dr. C. T. Wilkerson, Wake Forest, N. C., third vice-president; and Dr. J. W. Palmer, Ailey, re-elected secretary-treasurer.

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Dr. Edwin P. Jordan, nationally known medical writer, educator, and former practicing physician, is the new author of the NEA Service column, "The Doctor Says," which will be a regular feature on the editorial pages of *The Ledger*, Columbus. As a recognized authority, Dr. Jordan brings to readers lucid discussions of everyday health problems. He is a former associate editor of *The Journal of the American Medical Association*. He joined the AMA Journal staff in 1937. One of his interests in recent years has been a fight against rheumatism.

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Dr. Arthur M. Knight, Jr., Waycross, has declined the offer of the position of assistant dean at the University of Georgia School of Medicine and consulting physician at Veterans Hospital, both of Augusta. Dr. Knight has decided to remain in Waycross where he is a practicing physician.

Dr. Steve P. Kenyon, Dawson, recently addressed the Southern Medical Association at their annual convention held in Baltimore, Md. Dr. Kenyon is president of the Medical Association of Georgia.

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Dr. R. C. McGahee and Dr. Peter B. Wright, both of Augusta, were recently reappointed to the Richmond County Board of Health. The two physicians were appointed from a list of six medical men submitted by the Richmond County Medical Society.

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Dr. Wilbur D. Linquist, Waynesboro, was recently appointed as commissioner of health for the Bulloch County and the City of Statesboro Board of Health. Dr. Lundquist, who has acted as commissioner with the Burke-Jenkins-Screven Health District, will spend three days each week in Bulloch County and his other time will be spent in Bryan, Effingham and Evans counties.

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Dr. Samuel W. Norwood, Atlanta, with offices at 565 Lee St., S. W., announces the opening of additional offices at 73 11th Street, N. E., Atlanta. Practice limited to obstetrics and gynecology.

* * *

The National Conference of County Medical Society officers was held in the Euclid Ballroom, Statler Hotel, Cleveland, Ohio, January 6. Address of Welcome by Dr. George F. Lull, Chicago, secretary and general manager, American Medical Association. Purpose: To develop a working partnership between the American Medical Association and every physician.

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The Richmond County Medical Society, Augusta, recently honored its members who served in World War II by inscribing the 29 names on a bronze plaque to be hung in the foyer of the University Hospital, Augusta. The plaque was dedicated at a banquet held at the Louis L. Battey Post Home, with Dr. Preston Agee the speaker. The committee in charge of arrangements were: Dr. Righton Robertson, Dr. Preston Agee, and Dr. Ralph H. Chaney. The following names were inscribed on the plaque: W. J. Burdashaw, T. W. Goodwin, R. B. Greenblatt, F. N. Harrison, C. G. Henry, J. P. Hitchcock, H. B. Jenkins, C. M. Kilpatrick, J. H. Levy, J. Z. McDaniel, J. M. Miller, Chas. M. Mulherin, Philip A. Mulherin, J. T. Norvell, W. K. Philpot, Irvine Phinizy, Jack Sherman, F. H. Stelling, III, V. P. Sydenstricker, A. K. Temples, C. M. Templeton, D. R. Thomas, Jr., A. G. Thurmond, R. B. Weeks, E. A. Wilcox, W. A. Wilkes, W. J. Williams, L. C. Wood and T. M. Yates.

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Dr. Charles L. Ridley, Macon, chairman of the Macon-Bibb County Board of Health for the past 20 years, recently resigned his post and will be succeeded by Dr. R. W. Edenfield. Dr. Ridley said he is resigning because he is "not a young man any more." The Macon physician has been superintendent of the City Hospital for the past 14 years. He is also chairman of the State Board of Health. Dr. Ridley will remain as superintendent of Macon Ctiy Hospital.

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Dr. Thomas L. Ross, Macon, was elected president of the Sixth District Medical Society at the semi-annual meeting held at Macon, December 4. The spring meeting will be held at Milledgeville. Other officers are: Dr. Frank Vinson, Fort Valley, vice-president and Dr. A. M. Phillips, Macon, re-elected secretary-treasurer.

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The Southeastern Society of Neurology and Psychiatry was recently organized in Augusta. Dr. Cleve C. Odom, Linwood Veterans Hospital director, was named president of the newly-formed organization. Other officers named included Dr. W. A. Risteen, Augusta, and Dr. Joseph E. Fried, Columbia, S. C., vice-presidents, and Dr. Vincent L. Frankfurt of the Linwood staff, secretary-treasurer. The new society, which hopes to enlist some 100 leading doctors in the fields of neurology

and psychosomatic medicine, will include in its membership physicians from Charleston, Columbia, Savannah and neighboring cities. Meetings will be held monthly at different localities, first of which was held at Augusta, January 5. Membership in the society has been divided into four classifications: charter members, courtesy memberships, associate memberships and active memberships. Honorary memberships will be extended to persons who have accomplished distinguished research in the field of psychiatry of neurology, or who, by their practice in the field, have augmented the knowledge of the subject.

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The Tift County Medical Society met at the Alpine, Tifton, December 16, where the members were dinner guests of Dr. W. F. Zimmerman, the outgoing president of the society. The following officers were elected for 1948: Dr. Ella Andrews, president; Dr. M. L. Webb, vice-president; Dr. Richard K. Winston, secretary-treasurer; Dr. R. E. Jones, delegate to the Medical Association of Georgia meeting in Atlanta, and Dr. Richard K. Winston, alternate delegate.

* * *

Dr. Otho M. Simms, Atlanta, announces his association with the Lowance Clinic, Suite 215 Doctors Building, 478 Peachtree Street, N. E., Atlanta. Internal medicine, allergy, cardiology, pathology and roentgenology. Drs. Mason I. Lowance, Eugenia C. Jones, Warren B. Matthews, Edgar M. Dunstan, Wm. E. Carskadon, George Bachmann and Otho M. Simms.

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The Veterans' Administration recently announced Dr. John G. Hood, a native Georgian, has been transferred from the managership of the Veterans Administration Hospital, Perry Point, Md., to become manager of the Lawson Veterans Administration Hospital, Chamblee. Dr. Horace B. Cupp, now manager of Lawson Hospital, will transfer to the VA Branch Office No. 5 in Atlanta as assistant medical director.

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Dr. T. V. Willis, Brunswick, was recently guest speaker at the regular meeting of the Junior Chamber of Commerce at the Oglethorpe Hotel, Brunswick. His subject was "Existing Conditions at the Brunswick City Hospital."

## CONGRESS ON MEDICAL EDUCATION AND LICENSURE TO DISCUSS PROBLEMS

Some of the most important problems facing medical schools at this time will be discussed at the 44th annual Congress on Medical Education and Licensure, to be held under the auspices of the Council on Medical Education and Hospitals and the Federation of State Medical Boards at the Palmer House, Chicago, February 9 and 10, 1948.

Papers on the financial support of medical education will provide a highly significant discussion. The addition to the undergraduate curriculum of courses on the clinical effects of nuclear fission and on physical medicine and rehabilitation will be discussed by authorities in the fields. The recent intense interest in the subject of general medicine makes the review of programs for preparing students for general practice of particular significance.

In addition to the formal program of the Congress, several national groups concerned with medical education, research, hospitals and licensure will hold special meetings. These include the Executive Council of the Association of American Medical Colleges, the Advisory Board for Medical Specialties, the National Board of Medical Examiners, the National Society for Medical Research and others.

## ANNOUNCE TENTATIVE SCHEDULE FOR NEW RADIO PROGRAM, "DOCTOR'S TODAY"

The A.M.A.-N.B.C. radio program "Doctors Today," which opened December 13, 1947, is scheduled to run for 26 consecutive weeks at 3 p.m. each Saturday, Central Standard time. The exact number of stations taking the program will be announced when available; the 1947 series, "Doctors—Then and Now," was broadcast by approximately 140 stations from coast to coast.

"Doctors Today" is a program based on timeliness and therefore subject to change. The following schedule is therefore tentative. Announcement of changes will be made in *The Journal of the American Medical Association.*

Whenever possible programs cancelled in favor of more timely ones will be broadcast later in the series.

27 December 1947—Physical Fitness
3 January 1948—Cancer
10 January 1948—Care of the Chronically Ill
17 January 1948—Alcoholism
24 January 1948—Federal Control of Drugs
31 January 1948—Urgent Need for Nurses
7 February 1948—Health in Rural Schools

## A TRIP TO MERIDA, YUCATAN AND GUATEMALA

The New Orleans Graduate Medical Assembly is sponsoring an interesting visit to Latin America, planned to follow the 1948 assembly meeting. On Saturday, February 28, a party composed of doctors and their wives, will leave by Pan American Clipper for Merida, Yucatan. After a four-day visit they will fly to Guatemala City, Guatemala. While in Merida many places of medical and historical interest will be visited, including some of the best preserved ruins of the Mayan empire and civilization.

Following these delightful days of companionship and sightseeing, a medical program will be presented in Guatemala City. The sightseeing schedule will then continue in various directions from Guatemala City, the last day and a half of the trip being unscheduled to permit additional side trips or entertainment in the city as may be desired.

Departure from New Orleans will be on Saturday, February 28, and the group will return on Friday, March 12.

Details and a complete itinerary are available at the office of the Assembly, Room 105, 1430 Tulane Avenue, New Orleans.

## INTERNATIONAL SURGICAL ASSEMBLY

The Sixth International Assembly of the International College of Surgeons will be held in Rome, Italy, at the invitation of the Italian Government, during the week of May 16-23, 1948, under the presidency of Professor Raffaele Bastinelli and Raffaele Paolucci of Rome, and Mario Dogliotti of Turin. The secretary of the assembly is Prof. Giuseppe Bendandi of Rome. Attendance is not limited to the membership of the college: all surgeons in good standing in their medical organizations are invited. Scientific meetings, scientific and commercial exhibits, visits to the Universities of Turin and Milan have been arranged, together with tours to other medical centers in Europe. A special exhibit of ancient texts on surgery is being arranged by Prof. Davide Giordano of Venice, honorary president, under the active presidency of Prof. Adalberto Pazzini, Professor of History at the University of Rome. This extraordinary exhibit dealing with ancient surgery will be on display in the Vallicelliana Library in one of the historical buildings of the Vatican. Detailed information may be obtained from Dr. Max Thorek, general secretary, 850 Irving Park Road, Chicago 13. For travel information, address the All Nations Travel Bureau, 38 S. Dearborn Street, Chicago, the official travel representatives for this assembly. Those desiring to present scientific papers address Dr. Karl Meyer, Cook County Hospital, Chicago; Dr. Henry W. Meyerding, Mayo Foundation, Rochester, Minnesota; or Dr. Herbert Acuff, Acuff Clinic, 514 W. Church Street, Knoxville, Tennessee. Those from Canada should direct their inquiries to Dr. Lyon Appleby, 925 W. Georgia Street, Vancouver, B. C.

## NATIONAL CONFERENCE ON MEDICAL SERVICE

Chicago will again play host to the National Conference on Medical Service, February 28. Because the program features wide-open discussions of important controversial problems affecting medical practice, hospitals and nursing, the conference promises to be of outstanding interest to general practitioner and specialist alike, according to E. F. Sladek, M.D., Traverse City, Michigan, secretary of the conference.

President of the conference Creighton Barker, M.D., New Haven, Connecticut, will open the 1948 session in the Red Lacquer Room of the Palmer House at 9:30 a.m. The morning program will develop two viewpoints on the subject "The Practice of Medicine by Hospitals, Health Departments and Medical Schools" through papers presented by Everett W. Jones, general manager of the Modern Hospital, Chicago, and Lowell S. Goin, M.D., of Los Angeles. L. Fernald Foster, M.D., Bay City, Michigan, will speak on "Medical Public Relations Begins in the Doctor's Office." "Nursing Problems in America" will be reviewed by Thomas P. Murdock, M.D., of Meriden, Connecticut, and Janet Geister of Chicago.

The afternoon has been given over to panel presentations on the two subjects General Practice and Specialty Boards participated in by Wingate M. Johnson, M.D., Winston-Salem, North Carolina; C. F. Wilkinson, M.D., Ann Arbor, Michigan; Leroy E. Parkins, M.D., Boston; Paul Titus, M.D., Pittsburgh, and C. N. H. Long, M.D., New Haven, Connecticut. This will be followed by discussion with general audience participation.

The noon luncheon will offer a nationally known speaker to be announced later, Dr. Sladek reported.

## THE SOUTHEASTERN SURGICAL CONGRESS

The sixteenth annual assembly of The Southeastern Surgical Congress will be held in Hollywood, Florida, Hollywood Beach Hotel, April 5, 6, 7, 8, 1948. The following is a partial list of the men who will appear on the program:

Dr. E. G. Ramsdell, White Plains, N. Y.
Dr. Willoughby Kittredge, New Orleans, La.
Dr. Walter Stuck, San Antonio, Texas
Dr. Edward Jelks, Jacksonville, Fla.
Dr. Henry K. Ransom, Ann Arbor, Mich.
Dr. Amborse Storck, New Orleans, La.
Dr. Walter Jones, Miami, Fla.
Dr. Samuel F. Marshall, Boston, Mass.
Dr. Frederick Boyce, New Orleans, La.
Dr. Martin Nordland, Minneapolis, Minn.
Dr. George H. Martin, Vicksburg, Miss.
Dr. Charles Mayo, Mayo Clinic, Rochester, Minn.
Dr. J. Harvey Johnston, Jr., Jackson, Miss.
Dr. George Curtis, Cleveland, Ohio
Dr. Herbert Acuff, Knoxville, Tenn.
Dr. Carl Moyer, Dallas, Texas
Dr. R. L. Sanders, Memphis, Tenn.
Dr. Claude J. Hunt, Kansas City, Mo.
Dr. Charles C. Trabue, Nashville, Tenn.
Dr. Herman Kretschmer, Chicago, Ill.
Dr. Julian Rawls, Norfolk, Va.
Dr. L. J. Gariepy, Detroit, Mich.
Dr. William L. Sibley, Roanoke, Va.
Dr. Rudolph Jaeger, Philadelphia, Pa.
Dr. Julian A. Moore, Asheville, N. C.
Dr. Harry Bacon, Philadelphia, Pa.
Dr. James F. Robertson, Wilmington, N. C.
Dr. Ira Lockwood, Kansas City, Mo.
Dr. R. A. Ross, Durham, N. C.
Dr. H. G. Smithy, Charleston, S. C.
Dr. L. W. Dowlen, Miami, Fla.
Dr. David A. Wilson, Greenville, S. C.
Dr. L. M. Orr, Orlando, Fla.
Dr. A. F. Burnside, Columbia, S. C.
Dr. J. G. Lyerly, Jacksonville, Fla.
Dr. Lester A. Brown, Atlanta, Ga.
Dr. Gilbert E. Fisher, Birmingham, Ala.
Dr. John M. Wilson, Mobile, Ala.
Dr. Robert C. Major, Augusta, Ga.
Dr. M. Y. Dabney, Birmingham, Ala.
Dr. Fred Rankin, Lexington, Ky.
Dr. Arnold Griswold, Louisville, Ky.
Dr. Dargan Smith, Owensboro, Ky.
Dr. J. W. Deving, Jr., Lynchburg, Va.

## NEW BOOK

*Sexual Behavior in the Human Male*: by Alfred C. Kinsey, Professor of Zoology, Indiana University; Wardell B. Pomeroy, Research Associate, Indiana University; and Clyde E. Martin, Research Associate, Indiana University. 804 pages—173 charts—159 tables. Philadelphia and London: W. B. Saunders Company, 198. Price $6.50.

## PRESERVED CARTILAGE IS SUCCESSFULLY USED IN PLASTIC SURGERY OF EYE

Preserved cartilage is preferable to fresh cartilage in plastic surgery of the eye, writes Sidney A. Fox, M.D., New York, in the current issue of *Archives of Ophthalmology*, published by the American Medical Association.

In most types of modern restorative surgery a graft of cartilage is taken from the patient's own rib to be used in repairing the injured part. The use of preserved cartilage in plastic surgery has been revived only recently, Dr. Fox states. It has been used most extensively in reconstructions of the nose, ear, forehead, chin and other facial structures. However, he reports that he has used it in 17 cases of plastic surgery of the eye—with uniformly good results.

In four cases the preserved cartilage was used as a substitute for the firm framework of connective tissue which gives shape to the eyelid, in reconstructing and repairing the lid. In four cases it was used to repair the bony contours around the eye-socket after fracture and deformity. In five cases it was used to raise the contents of the eye-socket after fracture of its bony floor. In the remaining four cases it was used to fill in abnormal cavities in the empty socket caused by fracture. Dr. Fox followed all of these cases for at least six months, and noticed no change in the grafts. There were no infectious.

The chief advantages of using preserved rather than fresh cartilage, according to Dr. Fox, are four: (1) autopsy material is easily obtained and under proper conditions may be kept for as long as two years; (2) any problems associated with obtaining rib cartilage from the patient before the main operation are eliminated; (3) the period of hospitalization and discomfort is shortened; (4) grafts taken from persons other than the patient show less tendency to bend or curve than grafts taken from their own bodies; they heal with firmer union with the surrounding tissues and resist infection better.

Some plastic surgeons, Dr. Fox says, find that after a period of time preserved cartilage, being a "dead" tissue, has a tendency to be absorbed by the surrounding tissue into which it has been implanted. If this happens with a graft used to reshape a nose or chin the result may be failure, with further surgical repair necessary. He believes that this is less important in eye surgery. Even if a thin plate of preserved cartilage implanted into a lid is ultimately completely absorbed and converted into dense fibrous tissue, the resultant tissue structure closely resembles that which supports the lid.

## POLIO NURSES

The American Red Cross last year recruited 2,564 nurses to aid in the fight against the polio epidemic.

**The Ninety-Eighth Annual Session of the Medical Association of Georgia will be held in Atlanta, April 27-30, 1948. Make your hotel reservations immediately.**

## LAWSON VA HOSPITAL HAS NEW DIRECTOR

Dr. Horace B. Cupp, manager of the Lawson Veterans Administration Hospital in Atlanta, has been named assistant branch medical director of the agency, VA reported recently. He will assume his new duties at VA's southeastern branch office in Atlanta on January 11.

He will be succeeded at Lawson by Dr. John B. Hood, now manager at the VA Hospital at Perry Point, Maryland.

In his new assignment, Dr. Cupp will be top assistant to Dr. Frank B. Brewer, VA's Branch Medical Director, in supervising the medical program for veterans in 15 hospitals and six regional offices in five southeastern states. A native of Tennessee, Dr. Cupp came to Lawson last February from the VA hospital and domiciliary home at Mountan Home, Tenn., where he was clinical director.

The new Lawson manager is a native Georgian and graduate of the University of Georgia School of Medicine at Augusta. He entered VA's medical service in 1930. During the war he saw service with the Army Medical Corps in the South Pacific. After his discharge from the Army as a lieutenant colonel, he became clinical director of McGuire VA Hospital in Richmond and later manager at Perry Point.

## APPOINTMENT OF COMMISSIONED OFFICERS IN THE MEDICAL CORPS AND DENTAL CORPS OF THE REGULAR NAVY

The statutory authority contained in Public Law 365—80th Congress, Title II (Army-Navy-Public Health Service Medical Officer Procurement Act of 1947) makes it possible now for civilian doctors to become commissioned officers in the regular Navy, provided they meet the professional and physical qualifications. This law is unique in that it does away with, for the first time, the age limitation of thirty-two years of age and permits doctors in civilian practice to enter the Navy and be commissioned with the rank up to and including Captain. The law considers all strata of the medical profession, internes, residents, reserves, former medical officers who have resigned, and present practicing physicians.

In order to make application a doctor must be a citizen of the United States, a graduate from a Class "A" medical school and have served as least one year's internship in an approved hospital. Candidates will then be judged on a number of qualifications such as being a member of a specialty board, his teaching connections, the number of years of professional or scientific practice, hospital or laboratory connections, a statement of military service, etc.

The allocation of rank to successful candidates will depend upon their academic age, professional standing, and experience in the medical field. Successful candidates will then be integrated in line with medical officers of the regular Navy and assigned running mates accordingly. This means that they will be eligible for promotion along with their fellow officers of equal rank.

This law offers a fine opportunity for civilian doctors to make a career in the regular Navy and to enjoy its professional advantages as well as its retirement benefits. Doctors interested in such a career should write to the Bureau of Naval Personnel, via the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

## OBITUARY

*Dr. John Q. Brantley*, aged 67, Atlanta physician and surgeon, died November 21, 1947. Dr. Brantley graduated from the University of Georgia School of Medicine, Augusta, in 1905, and had practiced medicine for more than 40 years. He was a Mason, Shriner, Odd Fellow, and a member of the Roswell Baptist Church. Survivors are a son, John Q. Brantley, Jr., Atlanta; two sisters, four brothers; and two grandchildren. Funeral services were held at the chapel of J. Austin Dillon, with Rev. Charles Crowe officiating. Burial was in West View Cemetery, Atlanta.

* * *

*Dr. Archibald Smith*, aged 73, well known physician, died at his home, 800 Piedmont Avenue, N. E., Atlanta, following an extended illness, November 29, 1947. Dr. Smith was a native of Roswell. His family was one of the six original families to settle in Roswell, with Roswell King about 1840. He graduated from the University of Georgia in 1895 and graduated in medicine from the University of Pennsylvania School of Medicine, Philadelphia, in 1899. He interned at Kings County Hospital, Brooklyn, Bellevue, New York City, and the New York Lying-In Hospital, New York City. Dr. Smith had practiced medicine in Atlanta from 1903 until his death. He was active in the Medical Corps of the National Guard and saw active service in World War I. He also served for a time at Grady Hospital and was an instructor at the old Atlanta School of Medicine. He was a member of the Fulton County Medical Society, the Medical Association of Georgia, the American Medical Association, the Atlanta Athletic Assocation, and the North Avenue Presbyterian Church for more than 40 years. Dr. Smith is survived by a brother, Arthur W. Smith, Atlanta, and a cousin, Edward W. Barnwell, Savannah. Funeral services were held at Spring Hill, with Dr. Vernon S. Broyles, Jr., officiating. Burial was in West View Cemetery, Atlanta.

* * *

*Dr. John Henry Terrell*, aged 69, beloved and prominent physician of Toccoa and Stephens County, died of a heart attack, November 20, 1947. Born in Franklin County, Dr. Terrell was the son of the late William Terrell and Martha Ann Terrell. He graduated from the Atlanta College of Physicians and Surgeons in 1901, now Emory University School of Medicine, Atlanta. He was active for many years in the civic and religious affairs of Toccoa. He was a member and a deacon of the First Baptist Church, a member of the Kiwanis Club, and the Shriners, and was one of the first city commissioners. He also had served as mayor of Toccoa for a number of years. He was a member of the Stephens County Medical Society, the Medical Association of Georgia and a fellow of the American Medical Assocation. Survivors include one son, John H. Terrell, Jr., Toccoa; three daughters, Miss Celeste Terrell, Mrs. Howard Ayers, both of Toccoa; Mrs. Dale Stone, Rome; three brothers, and four sisters. Funeral services were held from the First Baptist Church, with Dr. A. T. Cline, Dr. Geo. C. Gibson, Dr. R. A. Forrest and the Rev. S. D. Cherry officiating. Burial was in Liberty Hill Cemetery, Toccoa.

* * *

*Dr. Joseph Atkinson Thomas*, aged 63, beloved physician and member of one of the oldest and best known families of Valdosta, died December 21, 1947. Dr. Thomas was the son of the late Mr. and Mrs. W. L. Thomas, early settlers of Valdosta, and was born and reared in Valdosta. He attended the local schools and took his pre-medical work at Alabama Polytechnic Institute at Auburn. He graduated in medicine from the University College of Medicine, now the Medical College of Virginia, Richmond, in 1908. He was a member of the ATO Fraternity. Dr. Thomas had been for a number of years a popular and successful practicing physician in Valdosta and Lowndes County. He was a member of the South Georgia Medical Society, the Medical Association of Georgia and a fellow of the American Medical Association. He was also a member of the First Baptist Church, Valdosta. Survivors include his widow, the former Miss Evelyn Brady; one brother, Dr. F. H. Thomas, and one sister, Mrs. W. F. Pendleton, all of Valdosta. Funeral services were held at the Sineath Funeral Home, with Dr. T. Barron Gibson, pastor of the First Baptist Church, officiating. Burial was in Sunset Hill Cemetery, Valdosta.

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# GEORGIA'S PLAN FOR INCREASED HOSPITAL FACILITIES AND HEALTH CENTERS

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*Georgia Department of Public Health, Atlanta*

Very few laws passed by Congress in recent years have had so much publicity or have been more generally discussed by all classes of the population than S. 191, which later became Public Law 725 of the 79th Congress, also known as the Hill-Burton Bill and the Hospital Survey and Construction Act. This law was conceived in the House of Delegates of the American Medical Association. The accoucheurs were bipartisan Senators Hill (Democrat) of Alabama and Burton (Republican) of Ohio. Its godparents include practically all of the leading organizations having an interest in the public welfare, including the American Medical Association, the Catholic Hospital Association, the Protestant Hospital Association, the American Dental Association, the American Nurses Association, all major farm and labor organizations, and many others.

Months before the bill became law, citizens from every section, and from almost every county and town, became interested in sharing in its benefits and made inquiry about how they might take advantage of the funds that would be made available. Most of the communities long ago became impatient at the delays that have been and still are inevitable.

Read before the Medical Association of Georgia, Augusta, April 24, 1947.

It is obvious that unless a definite, well thought-out plan with regard to the location, type, size and purpose of these hospitals is adopted and carried out, there will be a repetition of what happened following World War I. Many of you will remember that there was an era of locally planned hospital building at that time but few of you would have occasion to know or remember that within ten years more than 800 of those hospitals were vacant or being used for other purposes. This must not happen again. Provisions of the Hill-Burton Bill and regulations very recently released by the Surgeon General of the United States Public Health Service are designed to prevent this as far as possible.

This law requires that each state shall submit a "state plan" to the Surgeon General for his approval. The Federal regulations were released only a few weeks ago, and the preparation of a "state plan" will entail much additional work.

Only the general requirements can be discussed at this time, although we are already at work on the detailed plan. It is the aim of the Department of Public Health to have the plan ready and approved by the time Federal funds are available. This probably will not be before the next fiscal year, July 1. Some of the preliminary work has been completed. All necessary State legislation has been passed to the satisfaction of the Federal authorities. The survey of existing hospital facilities is progressing very well. The Hospital Advisory Council as required by Federal and State laws has been appointed, with one representative from the following official and non-official

organizations:

Medical Association of Georgia
Georgia Hospital Association
Georgia Pharmaceutical Association
Georgia Dental Association
Georgia Congress of Parents and Teachers
Georgia League of Women Voters
Association of County Commissioners
Agricultural and Industrial Development Board
Georgia Education Association
Georgia Public Health Association
Georgia State Nurses' Association
Georgia Press Association
State Board of Social Security

Among the first things to be contained in the "state plan" is the designation of "areas" of three types: base, intermediate and rural.

1. A base area must contain a teaching hospital of a medical school approved by the American Medical Association's Council on Medical Education and Hospitals, or have a total population of 100,000 and a general hospital with 200 or more beds for general use. Such hospital shall be approved by the American Medical Association and the American College of Surgeons for internship and for residences for two or more specialties, and be suitable as a base hospital in a coordinated hospital system.

2. An intermediate area shall have a population of 25,000 or more and contain or will contain when the program is completed at least one general hospital with 100 or more beds, and be suitable as a district hospital in a coordinated hospital system.

3. A rural area is any designated area no part of which is included in a base or intermediate area.

The whole construction program, therefore, provides for a coordinated hospital system in which the base hospitals serve the intermediate or district hospitals and the latter in turn serve rural and other hospitals with such diagnosis, treatment, research and teaching services as cannot be provided individually. The distribution of hospital beds in these areas is to be 4.5 beds per 1000 population in base areas, 4.0 in intermediate areas, and 2.5 beds in rural areas. These figures include existing hospital beds. In case the total number of beds which are permitted for the several areas is smaller than the total for the state, a "bed pool" is to be formed, from which the state agency may distribute at its discretion, giving consideration to hospitals serving rural areas and communities with relatively small financial resources.

For specialized services, the maximum state allowances for tuberculosis patients shall be 2.5 times the average annual death rate from tuberculosis over the five-year period 1940 to 1944 inclusive; for mental patients, 5 beds per 1000 population, and for chronic disease patients, 2 beds per 1000 population. (These numbers are to include existing beds in special hospitals and those beds in general hospitals especially assigned for such patients if 10 or more in any hospital are so assigned. Where practicable, such special hospitals are to be built in centers of population and near a general hospital.)

In the Act the definition of a hospital not only includes general and special hospitals and related facilities such as laboratories, out-patient departments, nurses' homes and training schools, but also public health centers. A public health center is defined as a publicly owned facility used by a local health department in the endeavor to prevent disease, prolong life, and maintain a high degree of physical and mental efficiency. Each state is entitled to one such center, counting existing suitable centers, per each 30,000 population, or about 104 centers in Georgia.

Dividing the State into these various "areas", base, intermediate and rural, so that every part of the State is included, with no overlapping, is no easy task except in comparison with the next step, which is fixing priority of projects. Priorities must be fixed between the five categories of facilities; viz., health centers, general, mental, tuberculosis and chronic disease hospitals, in proportion to the need for each. These may be designated by the Roman numerals I, II, III, IV, and V. Now let us suppose that health centers are given priority III under this classification. Georgia may have a total of 104 centers and if she now has 24 suitable centers, we could submit projects for 80 new health centers. It must then decide which project is most needed, and, using Arabic numerals, assign priority 1 to this, the next 2, and so on, until all 80 are given a priority rating.

Then suppose general hospitals are given priortiy I. These must be broken down further into base, intermediate and rural, which may be designated by the letters A, B and C, giving special consideration to projects that are to serve rural communities and areas with relatively small financial resources. Using Arabic numerals as above, each of these must be then given a priority. Every area must be given a priority according to need and without regard to whether or not the community has made or anticipates making application. However, if an area with a lower priority is ready with its share of the funds, plans, etc., and an area with a higher priority is not ready to proceed, the project of the former may be approved.

Replacement of present facilities is to be considered only where the existing hospital is declared to be a public hazard or where the health center is unsuitable for its purpose.

The size and character of a facility shall be such as to be consistent with efficient and economical operation. Each applicant must give assurance that where feasible there will be provision for a reasonable volume of free-patient care.

After the "state plan" has been prepared and before it is submitted to the Surgeon General for approval, it will be publicized, and all interested persons and organizations will be given an opportunity to be heard at a public hearing. Following approval of the plan by the Surgeon General, the general provisions of the plan will be published in the press of the State.

This plan differs materially from previous Federal plans for helping communities in building programs. It is not another P.W.A. program to be administered by the Federal Government. It is a grant-in-aid program, and a major share of the responsibility for prescribing regulations affecting the distribution and construction of all facilities is delegated to the individual states subject to the regulations issued by the Surgeon General with the approval of the Federal Hospital Council.

No applications for individual projects may be filed until the "state plan" has been approved by the Surgeon General, and then these applications must be filed on forms prescribed by the Surgeon General. With each application the State Board of Health must certify that:

1. That the application contains reasonable assurance as to title, payment of prevailing rates of wages, and financial support for the non-Federal share of the cost of construction and the entire cost of maintenance and operation when completed;

(i) Availability of funds for the non-Federal share of construction costs shall mean (a) fund immediately available, placed in escrow, or acceptably pledged, or (b) funds or fund sources specifically earmarked in a sum sufficient for that purpose

or (c) other assurances acceptable to the Surgeon General.

(ii) To assure the availability of funds for maintenance and operation, the applicant for the construction of a new project must have included in the application a proposed operating budget, on a form prescribed by the Surgeon General giving assurance that (a) for the first year of operation, available funds, contingent or other acceptable pledges, or escrow arrangements for funds are equal to the difference between proposed operating expenditures and anticipated revenue from patients and are not less than one-third of the proposed operating expenditures for that period, and (b) for the second year, available funds, contingent or other acceptable pledges or escrow arrangements for funds are equal to the difference between proposed operating expenditures and anticipated income. In the case of publicly sponsored applications the statement of the responsible public officials may be accepted as sufficient assurance. In the case of an addition to an existing facility, the applicant must have given assurance, through one or more of the means specified above, that funds are or will be available to meet the difference between proposed expenditures and anticipated income from the operation of the constructed addition for the two-year period immediately following its completion;

2. That the plans and specifications are in accord with Appendix A (*General Standards of Construction and Equipment*);

3. That the application is in conformity with the State plan approved by the Surgeon General and contains an assurance that the applicant will conform to the applicable requirements of the plan;

4. That the application contains an assurance that the applicant will conform to the requirements regarding the provision of facilities without discrimination on account of race, creed, or color, and for furnishing needed hospital facilities for persons unable to pay therefor;

5. That the application contains an assurance that the applicant will conform to the State standards for operation and maintenance and to all applicable State laws and State and local codes, regulations, and ordinances;

6. That the application is entitled to priority over other projects within the State and that in making this determination the State agency has complied with paragraph (b) of this section; and

7. That the State Agency has approved the application.

Appendix A, *General Standards of Construction and Equipment*, mentioned above, consists of about 25,000 words dealing with general architectural specifications that must be complied with. Only a sample of some of the general requirements in this appendix can be cited here, and these apply to hospitals of 100 beds or less.

Administration:

- Business office with information counter
- PBX board and night information
- Administrator's office
- Director of Nurses' office
- Record room
- Staff lounge
- Lobby
- Toilets

Laboratory room for each 50 beds

Radiographic room, with darkroom, office and toilet adjacent.

Drug room with facilities for compounding.

About one third of the rooms shall have one bed, one third two beds, and one third four beds, with not more than four beds in any room. Each room shall have a lavatory. Single-bed rooms are to have 125 square feet of floor space, and two and four-bed rooms shall have 80 square feet per bed.

Each nursing unit (30 beds) shall have: nurses' station, utility room, pantry, two toilets, bed-pan facilities, bathroom, stretcher alcove, linen closet, supply closet, janitor's closet. There shall be a treatment room for each two nursing units, a solarium, and nurses' toilet.

The full-term nursery shall have not more than twelve bassinets, with floor space of 24 square feet per bassinet, with examination and work rooms between each two full-time nurseries. Premature nurseries shall have not more than six bassinets and 40 square feet per bassinet.

Surgery—One major operating room and one minor operating room per fifty beds with several auxiliary rooms.

Obstetrics—This unit shall be completely separate from the surgical department, with one delivery room for each twenty maternity beds, and one labor room for each ten, with several auxiliary rooms.

The emergency department shall have separate ambulance entrance, and shall be entirely separate from the operating and obstetrical suites.

The requirements for dietary, housekeeping, employee and storage facilities are detailed.

It may appear that the technical requirements are unusually strict but let us remember, gentlemen, that we shall be building hospitals which will be used by our sons' grandsons. As they practice in them they will thank those whose forethought made it possible for them to serve a better Georgia.

DISCUSSION OF PAPER BY DR. LUNSFORD

DR. STEWART BROWN (Royston): Mr. President and gentlemen, I have greatly enjoyed listening to Dr. Lunsford's discourse. We doctors who practice in rural sections, where we have little or no hospital facilities, are going to find it very hard to measure up and qualify, from what Dr. Lunsford has said and from what literature I have been able to secure and read on this subject. When the Hill-Burton Bill was first introduced and passed all of us doctors, and especially those in the rural sections, were more or less electrified with the idea that we were going to have a hospital. For some twelve months now, however, I have been very busy working on the plan of getting a small hospital, 35 or 40 beds, built in our community for the people we serve in a limited manner in about three counties. There are so many things that are required that I do not see how we are going to measure up to those stringent requirements. That is very disappointing; and I think it is going to be more disappointing as we go further with it because, as Dr. Lunsford said, the technical requirements in the construction are almost prohibitive in many sections.

Dr. Lunsford, I should like to ask one question, if you have that information for us when you finish up your paper. Just what part of the money does the Government propose to spend in these hospitals?

Pardon me for referring to my local situation, but that is about the only way we can get down to the actual, practical side of building hospitals. I know that in the beginning many towns and cities and counties had the same thought and began to inquire "How can we get one?" I went to work on this proposition and felt that if I was able to guarantee the funds which would be put up by the local community I would have finished say 75 per cent of the battle. But then they have another requirement there about the guaranty that you are going to keep this hospital open. Then they also require that you must take a certain amount of charity and under no circumstances must you turn away this one and that one. All of those things may be ironed out and can be ironed out, I am sure; and there may be some of these hospitals built, but on the whole I think we shall be disappointed about the number we shall get. Fortunately, in my community I was able to interest a great friend of mine, one of our great Georgians who has made himself renowned through being probably the world's greatest champion in baseball, Mr. Cobb. He came across very willingly and put up the amount of money which it is necessary for us to put up in our community. There we stopped and have not gotten any further.

As I say, I am not able to discuss this thing in any concrete manner. We are still waiting and waiting and waiting on Congress to act, and I suppose they will, but it seems a long time off. As I understood in the beginning, the Government was going to assume 66 2/3 per cent of the cost of these hospitals out of an appropriation of $75,000,000. I understand now from some members of Congress that that is going to be cut down to probably $50,000,000; and I understand that this money may not be available, certainly not in the next twelve months and perhaps not for two years. If I am wrong I hope you will set me right, Dr. Lunsford.

I shall be glad to do anything I can to help in this program.

DR. ENOCH CALLAWAY (LaGrange): I think Dr. Lunsford has done a very fine job in briefing a long Act of Congress. I do not see that there is anything to discuss about it. It is a matter of law, and we can get the benefits if we meet certain requirements. I think the objective of distributing hospital beds throughout the country is fine. Ultimately the law will have a salutary effect on the practice of medicine, by giving the proper facilities. Right now it seems it is all in the future and has to be worked out. We should all feel indebted to Dr. Lunsford, however, for briefing this in such a fine fashion and presenting it to us, so that we do not have to read the bill itself. I did read the law, but I like Dr. Lunsford's paper very much better.

DR. G. LOMBARD KELLY (Augusta): The emphasis apparently has been placed on small hospitals in all discussions I have heard of the Hill-Burton Bill. I should like, for the record, to claim emphasis for a large hospital to be constructed out of the Hill-Burton funds; and that is for a general medical and surgical hospital on the campus of the Georgia University School of Medicine. At the present time we have an appropriation of $50,000 a year to take care of patients in 159 counties. It gives us 32 beds, and we have a long waiting list of patients all over Georgia that need treatment of all kinds that we can not possibly take care of. I should like, off the record now, to give you

a picture of what I have recently presented to the Regents of the State University, and that is a plan for hospital care in Georgia. That is by removing politics from our eleemosynary institutions and creating a board of control to direct the operation of hospitals and any other institutions in which there are patients supported by taxpayers of the State of Georgia, and that the medical and surgical care of all these institutions be placed under the faculty of the State School of Medicine, with specialty board certified assistant and associate professors stationed in those institutions so that young gradnates can be brought up as specialists in the various fields, and that every graduate of medicine in Georgia be required to spend one year in a rotating internship in those institutions before he is granted his diploma—a fifth year of medicine, so to speak.

I should like to inquire of Dr. Lunsford what his agency is doing in the way of a general medical and surgical hospital for the people of Georgia, costing upwards of $2,000,000, to take care of these sick people all over the State and providing better means of training the young doctors in the State.

DR. GUY G. LUNSFORD (Closing): In reply to Dr. Brown's question about the Government's contribution, the original bill provided for Federal participation ranging from 33 1/3 to 75 per cent, depending upon the financial resources of the local community. As it finally passed and was signed by the President, it is, unfortunately, one-third of the cost of construction, regardless of the location, whether rural, intermediate, or base.

As to when the money will be available, your guess is as good as mine. Within the last two weeks the House of Representatives in Washington passed a law or act whereby the Federal Government could be obligated for its share of this construction program. By that is meant that, although the money is not available, if the local community should go ahead and present the application and it is approved by the Surgeon General, the Federal Government will be obligated for its part of the cost. It has not been passed by the Senate, nor signed by the President. That would be better than an appropriation because, as Dr. Brown said, an appropriation would probably not be for more than $50,000,000 a year. This appropriation program would be for the whole sum of $75,000,000.

As for Dr. Kelly's question, that has not been reached yet. We are still studying the bill and the regulations sent out by the Surgeon General, and we are getting our plan ready to present to the State Board of Health at its next meeting along with the State Advisory Council, as provided by law. Those of you who have read the bill know that it says that special consideration shall be given to rural communities and to those communities with limited financial resources.

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## FIRST CASE OF CRANIAL ARTERITIS IN PATIENT UNDER 50 IS REPORTED

The first case in which a patient has shown symptoms of cranial arteritis (inflammation of an artery of the temple) at an early age is reported in the January 17 issue of *The Journal of the American Medical Association*. The report comes from two New York doctors, Lawrence Meyers, M.D., and Jere W. Lord, Jr,. M.D.

Previously the disease, a rare one, has been observed only in persons over the age of 50 years.

In this particular case, the patient was a woman, 22, and her chief complaint was headaches. Since her left temporal artery was found to be inflamed, the entire involved segment was removed. The patient recovered, and has remained entirely free of symptoms for one year, the doctors report.

# PARANASAL SINUS INFECTION IN INFANTS AND CHILDREN

TAYLOR S. BURGESS, M.D.
*Atlanta*

According to J. Parsons Schaefer[1] the maxillary sinus at birth measures 8 by 4 by 6 mm. The ethmoid cells average 5 by 2 by 3 mm.—their number varying from 3 to 15. The sphenoid sinus originates as an enclosure of the posterior dome of the nasal cartilaginous capsule and lies ventral to the body of the sphenoid bone which it does not invade until about the fourth year of life. Its average measurements at term are 2 by 2 by 1.5 mm. The frontal sinus develops later as an upward pounching of the frontal recess or an infundibular ethmoid cell, reaching the level of the nasion between the third and fourth year. This sinus is the most variable of all. According to Maresh there is an aplasia of both frontal sinuses in 5 per cent of cases, of one frontal sinus in 11.5 per cent, and a hypoplasia in 30.4 per cent of cases. The floor of the maxillary sinus at birth is considerably above the level of the floor of the nose which it does not reach until the eighth or ninth year. This anatomic fact must be kept in mind in irrigating the antrums in young children. The subsequent development of the sinuses parallels the development of the child's facial bones. At 6 years the maxillary sinus measures 27 by 17 by 17 mm., and by the twelfth year has assumed adult measurements.

Histologically the infant sinus is similar to that of the adult. It is lined by ciliated, columnar, pseudostratified epithelium which is continuous with that of the nose. Underlying this is an indefinite basement membrane; and beneath this is a fibro-

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elastic tunica propria, which contains the mucus-secreting glands, and the lower fibers of which are densely adherent to the periosteum. The sinus mucosa of children is more fragile than that of adults with more permeable vessel walls. Thus a transudate or exudate may become more easily established, and conversely more easily eliminated. With the onset of infection there is edema of the epithelium and subepithelial tissue with infiltration of red cells, polymorphonuclear cells, lymphocytes, plasma cells, and young connective tissue cells.

Normally the sinus epithelium produces a thin film of mucus which covers the surface in an unbroken sheet of considerable tensile strength. Movement of the underlying cilia keep this sheet in continuous wave-like motion towards the ostium. This moving sheet of mucus engulfs any foreign particle and is an important factor in protection against infection.

Fabricant[2] found the pH of healthy nasal secretions to be a little on the acid side fluctuating between 5.5 and 6.5, distilled water being 7. During infections and allergic reactions there is a shift towards the alkaline side.

Sinus infection in children occurs with considerable frequency. Crooks[3] in routine antrum puncture found muco-pus in 24 per cent of his cases. He quotes Mollison as reporting pus in 22 per cent, Carmach 30 per cent, and Ebbs in 30.6 per cent of 496 routine autopsies in children. Lynch[4] found evidence of sinus infection in 68 per cent of 1000 cases of otitis media. Brown and Wasson[5] found sinusitis in all of 100 cases of rheumatic fever. Dean[6] found chronic empyema of one or more sinuses in 34 of 234 cases sent in for tonsillectomy. Among 2048 consecutive cases in my own practice there were 93 cases of sinus infection in children.

Although it is possible for the invading organism of a diseased sinus to be blood-borne, most sinus infection originates from an acute rhinitis. Infected tonsils and adenoids are responsible for many, and their removal may result in cure. Dean[7] stated that 80 per cent of children with diseased sinuses and infected tonsils and adenoids could be cured by tonsillectomy and adenoidectomy. According to other authors this figure is a little high. Allergy plays a prominent role in sinus disease in children. The swollen, edematous allergic membrane interferes with proper sinus drainage and aeration; and, once it has become infected, it is almost impossible to get rid of the infection until the allergic factor has been controlled. Children on diets deficient in vitamins and minerals are prone to develop sinusitis. Scantlebury[8] lists as causative factors: deficient hygiene, defective feeding, bad climate, allergy, exposure to local infections, nasal abnormalities, hypertrophied tonsils and adenoids.

The symptoms and signs of sinus infection in children are multiple. Nasal discharge and obstruction are outstanding. The obstruction is intermittent and worse on the dependent side when the patient is lying down. The discharge is thick, tenacious and discolored. It may be seen on anterior rhinoscopy or may be entirely post-nasal and seen dropping down the nasopharynx when the child gags. Cough is a very prominent symptom. It is usually productive and worse on lying down. Frequently examination of the chest is negative. It may be the only presenting symptom; and, unless the physician first seeing the child includes a sinus x-ray or a careful rhinologic examination in his study, the diseased sinus may be overlooked completely. Headache occurs, but not with the frequency or severity found in adults. A low grade, irregular, persistent fever may be the only sign of a subacute or chronic sinus infection. Some years ago I[9] called attention to the heavy, musty odor

frequently accompanying sinus infection. Dean[10] noted that sneezing occurred often in infants with ethmoiditis. Hypertrophied nodules of lymphoid tissue on the posterior pharyngeal wall along with palpable cervical lymph nodes are common. Other more unusual symptoms which have been described are: puffs beside the nose, elongated uvula, nasal twang to the voice, circles beneath the eyes, epistaxis, eczema of the nares, anorexia, pallor, rough skin. McMahon[11] comments on the importance from a nutritional standpoint of the loss of smell which may accompany an ethmoid infection.

The diagnosis of sinus infection depends upon finding pus in one of the meati of the nose into which the sinuses drain; aspirating pus directly from a sinus; or upon x-ray evidence. Transillumination is of some value if there is a difference in translucence of the two sides; but it is quite unreliable, and should not carry too much weight.

The object of all type of sinus treatment is to secure drainage and aeration or to remove diseased membrane. Because of the developmental factor it is wise in children to hold surgery to the minimum, and to reserve radical or destructive surgery for those cases where all other forms of treatment have failed and where the child's general health is gravely menaced by the disease. Fortunately these conditions occur rarely.

In my hands the local treatment giving most satisfactory results is that originated by Proetz—displacement irrigation of the sinuses. A vasoconstrictor on pledgets of cotton is introduced close under the middle turbinates; or is dropped into the nostrils with the head in hyperextension or in the low lateral Parkinson position, the drops going into the dependent side. After five or ten minutes when adequate vasoconstriction has occurred, the patient lies on his back with the head off the end of the table or chair in hyperextension so that the point of the chin is in a perpendicular line with the external auditory meatus. One or 2 c.c. of 0.125 per cent ephedrine or 0.084 per cent neosynephrine in normal saline are introduced into each nostril. Suction of not more than 15 pounds pressure is applied to each nostril in turn several times for only a second or so. This is repeated until 8 to 12 c.c. of solution have been used. The principle involved is that when the air in the dependent sinuses is bubbled up through the overlying solution it is replaced by the solution which washes out any pus in the sinuses. Patients are seen every other day. While this treatment is particularly effective in spheno-ethmoid infection, the position of the head favors antrum drainage; and a large majority of acute maxillary sinus infections can be cured by this procedure. If after a reasonable time the desired results have not been secured by this or any other form of local treatment, a check up x-ray study is indicated. If there is evidence of empyema of any sinus one should not hesitate to irrigate or, if necessary, place a window in the refractory sinus. These drainage and aeration operative procedures do no harm whatever to the physiology of the nose and will prevent more serious and destructive surgery in later life.

Time will permit me only to mention chemotherapy which is of inestimable value, particularly in the more severely ill patient. Vaccine therapy—preferably autogenous—is of great value especially in the low grade chronic type with frequent exacerbations.

I wish to report the following cases:

CASE 1. A. L., a four-year-old girl during a head cold developed rapidly increasing swelling of both eyes, along with almost complete nasal stoppage, a purulent nasal discharge and temperature of 105. This was before the day of chemotherapy. Conservative treatment of the sinuses resulted in a gradual subsiding of the infection. Three weeks after the onset x-ray showed dense blurring of the left antrum. A window was placed through the inferior meatus into the sinus, and it was irrigated several times. Three months later the x-ray showed normal sinuses except

for slight thickening of the lining membrane of the antrum. This was in 1931. She has had no further serious trouble with her sinuses and is in excellent health.

CASE 2. A. S., a six-year-old boy, during the course of a cold developed gross hematuria. X-ray showed dense blurring of each antrum. Intensive local treatment of the sinuses for three weeks resulted in disappearance of all signs of sinusitis and in a clear urine.

CASE 3. E. H., a nine-year-old girl developed a small acute lung abscess along with a purulent nasal discharge. X-ray showed dense blurring of each antrum. Bilateral antrum windows cleared up the sinus infection and resulted in a rapid disappearance of all pulmonary symptoms.

CASE 4. G. M., a twelve-year-old boy developed a persistent unexplained cough. On x-ray study the right antrum and both posterior ethmoids were found to be involved. He was given displacement irrigation therapy for three weeks. At this time all symptoms had disappeared. One month later x-ray showed the sinuses to be essentially normal.

CASE 5. J. B., a thirteen-year-old boy, had been running an unexplained temperature and developed a suppurative cervical adenitis of the left side for about a year. When I saw him he still had occasional bouts of low grade fever and had several enlarged posterior cervical glands left. X-ray showed a cloudy left antrum. Proetz displacement irrigation over a rather prolonged period of time resulted in marked clearing of the antrum to x-ray, disappearance of the temperature and considerable reduction in the size of the glands.

CASE 6. H. D., a four-year-old boy had had very frequent colds and coughs for the past year; and, when seen, had been coughing for several weeks. Examination disclosed obvious bilateral infection of the nasal sinuses, and chronically diseased tonsils and adenoids. He received Proetz displacement irrigation treatment for three weeks. At that time he had improved considerably but still was coughing some. X-ray showed both antrums to be cloudy—more marked right, which antrum apparently contained fluid. The tonsils and adenoids were removed, the right antrum irrigated, and he went to Florida. He returned in a month apparently well with negative findings on nasal examination.

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# TRENDS IN PEDIATRIC IMMUNOLOGY

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With full realization that the opinions of various clinicians as regards the proper value of various immunizing agents in pediatrics are about as varied as they are on infant feeding, I shall nevertheless attempt to review briefly new immunologic procedures introduced, plus different uses of agents already in use during the war years and the months immediately following, and in addition make a few observations and conclusions from office practice during this period.

1. Combination of various immunizing agents into a product that can be given in one injection rather than the injection of each of them singly.

The three most common of these combinations in the order of their appearance are:

A. Diphtheria toxoid and tetanus toxoid.
B. Diphtheria toxoid and pertussis vaccine.
C. Diphtheria toxoid, pertussis vaccine, and tetanus toxoid.

The advantages of the combination of immunizing agents into a single injection are:

1. Fewer injections with less physical discomfort to the child resulting.
2. Less psychic disturbance to nervous and apprehensive parents.
3. Fewer trips to the office with a resultant saving of the physician's time.
4. Decrease of cost of total immunization.
5. Enhancement of the antigenic value of each product over same

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value when given singly.

In regards to the last point, it may be said that although at first there were some misgivings concerning the antigenic value of these products in combination, it seems to have been definitely proven that these values are increased rather than decreased when in combination, especially the diphtheria component.

Although the combination of diphtheria, pertussis, and tetanus would seem to be the perfect answer to the problem, for some reason I have hesitated to use all three on the seven month old infant and have reserved its use for children over one year of age and have had no severe local or general reaction from its use.

Despite the fact that a large number of physicians use the diphtheria-tetanus combination routine as the first immunizing procedure and give pertussis vaccine later, I have always believed that since diphtheria and pertussis are the two most dreaded diseases of the first eighteen months and the tetanus hazard occurs later, it is much more logical to use diphtheria-pertussis first and to institute tetanus immunization later. Therefore for the last two years I have used alternately in office routine two products of the former type; namely, Bio 2090 (Parke Davis & Company) and Perdipigen (Lilly), the chief difference being that the pertussis organisms in the former are cultured on human blood and in the latter on animal. Local reactions have been negligible in most cases—systemic reactions have varied from none whatsoever to moderately severe with both products, reaction being comparable to those obtained with the use of pertussis vaccine alone. Out of approximately 1800 of these injections, I have been able to perform follow-up Schick tests on only 800. In this group, however, I encountered only 4 positive Schick tests as compared to pre-war years when we were fortunate to secure as many as 80 per cent negative Schick tests following immunization. The same Schick and Schick test control material was used as in former years with the difference that the tests were performed six months or more after completion of the immunization instead of three months as formerly. At the present time unfortunately we have no practical test for routine office use to determine susceptibility to pertussis. The complement fixation test is very valuable but is too technical for routine use.

During 1944 and 1945, I used for routine office work the antigen manufactured by Eli Lilly to measure the production of agglutinins in the blood following pertussis immunization. This test is easy to perform and its mechanism may be compared roughly to that of a macroscopic Widal, the only materials necessary being a drop of blood from the patient, the Lilly antigen and a piece of hard, preferably glazed cardboard. This test, however, is markedly restricted in value and is certainly not the complete answer to the problem. The work now being done on material for intracutaneous testing by Flosdorf holds promise for the production of some satisfactory practical test for susceptibility to pertussis.

2. Scarlet Fever Streptococcus Toxin (Tannic Acid precipitated).

This product which is injected only intracutaneously is similar in its immunizing properties to alum precipitated toxoids in that it is absorbed more slowly and a prolonged antigenic response ensues. A much smaller dose of toxin is used than in subcutaneous injection of toxin and most of the severe systemic reaction resulting from the previous methods of immunization are avoided—however, the local reactions are quite severe in some cases. Probably due to the marked decrease in both mortality and morbidity in scarlet fever in recent

years as compared to one or two decades ago, this product apparently has not been widely used. However, since many serious complications do sometimes occur following relatively mild scarlet fever, I feel that this material is worthy of more widespread clinical trial.

3. Pertussis Endotoxoid-Vaccine.

This material, manufactured by both Ayerst and Wyeth, consists of a suspension of formalin killed Phase I pertussis organisms with the addition of a toxoid prepared from pertussis endotoxin separated from bacterial residues. The endotoxoid stimulates the production of anti-endotoxin neutralizing toxins released by *B. Pertussis*, the vaccine stimulating antibodies against the bacteria themselves. Theoretically at least this product should be superior to pertussis vaccine alone. Systemic and local reactions following its injection are usually mild to moderate. I have injected about 200 children with this material during the past 18 months and so far know definitely of only one case of pertussis in those vaccinated and this child did not complete the series of injections.

4. Aluminum Hydroxide Adsorption.

This method of production of toxoids first used in Europe and later improved on in this country by the Cutter Laboratories is similar to that of alum precipitation but it is claimed that although a higher antigenic value is obtained, due to more normal pH of aluminum hydroxide, most of the local reaction to alum precipitated preparations is avoided.

5. Influenza Virus Vaccine.

The value of this material which is prepared from the allantoic fluid of chick embryos previously infected with strains of the influenza virus seems to have been established by its use on a very large scale in the military services. However its use in children to date has not been extensive, and the immunity produced is relatively short-lived, so for the present I do not believe that it will be used as a routine immunization procedure but will be reserved for epidemic periods and for repeated immunizing injection in children who are debilitated or ill from some other disease.

6. Pertussis Immune Serums.

These products are used for the production of passive immunity to pertussis in exposed subjects and are also used in the treatment of pertussis in its earlier stages. Serums produced by the hyperimmunization of rabbits using the endotoxoid-vaccine previously described are marketed by Ayerst and Wyeth. Those produced by hyperimmunizations of healthy adult donors with a previous history of pertussis may be obtained either from the Philadelphia Serum Exchange or Cutter Laboratories. Although results from the use of these products are often disappointing, and the hazard of allergic reaction from those of animal origin is always present, their use is justified as the only therapeutic agent available at this time for the production of passive immunity in pertussis.

7. Tetanus Toxoid.

Although a great deal of investigation of the value of this product was done in the middle twenties, it remained for World War II to prove beyond a doubt that it is one of the most, if not the most, efficient immunizing agent produced to date. It should certainly eventually become a routine immunizing procedure for all children and at the present time should be a must procedure for all allergic ones. However, I have contended for six years that the improper or inadequate instruction of parents at the time of injection in regards to its limitations is dangerous.

During 1944 and 1945, I questioned the parents of all children in the office who had a history of previous tetanus immunization. Ninety per cent of these parents had the

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idea that the tetanus immunization removed the hazards of tetanus for life. Out of several hundred parents we found only three who even knew what a "booster" injection was, only four who knew the difference between tetanus toxoid and antitoxin and three who knew that an "injury dose" is desirable. I believe that no immunization at all might be preferable in the long run to the false sense of security produced by this lack of knowledge. The parent should be instructed that although a satisfactory circulating antitoxin level is produced within a few weeks time, this level gradually decreases to a varying degree in different individuals over a period of months or years, but that it can be quickly restored to or beyond its original level within a few hours or days by the injection of a stimulating dose at intervals, and that in cases of injury with apparent tetanus hazard, an additional dose should always be given. A great majority of the parents questioned were the wives of soldiers or itinerant war workers from other sections of the country but now that most of us have a little more time, I think we should all take the few minutes necessary to instruct parents in the proper use of this product.

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## DISCUSSION OF PAPERS BY DRS. BURGESS AND BOSWELL

DR. R. C. McGAHEE (Augusta): The fact that infections of the paranasal sinuses in infants and children exist is a fairly new concept, but one that has become generally accepted. Dr. Burgess stresses three points: (1) that certain of the sinuses are fairly well developed even in infancy, (2) that these sinuses may become infected and (3) that this infection may not only give rise to disease processes locally but even in remote parts of the body. Certainly bronchitis, bronchiectasis, sinus lung, rheumatic fever and arthritis have been attributed to infection in the paranasal sinuses. As a cause of substandard health and obscure fevers, infections of the nasopharynx and particularly in these sinuses stand first. I am sure this is true if we exclude nutritional causes and hygienic factors.

One point regarding prophylaxis should be stressed. Infection in these sinuses is due primarily to stasis. Therefore any condition leading to stasis should be removed if possible. Enlarged adenoids, deflected septums, foreign bodies and allergy are examples.

Dr. Burgess has rightfully stressed conservative treatment for children reserving radical surgery for those patients who do not clear up under medical treatment or for urgent cases such as bronchiectasis, etc., which do not respond satisfactorily.

I know of no condition in pediatrics where need for more cooperation exists between the otolaryngologist, the pediatrician and at times the allergist than in persistent paranasal sinuses infection.

In regard to Dr. Boswell's paper on immunology, he has brought out the fact that combining certain of the immunizing agents does not detract from their antigenic properties. He also advises early immunization against pertussis. While the antigenic response possibly is not as good in the first few months of life it certainly gives some protection at a time when the disease affects the patient worst. Booster punctures later should be given to raise the titer.

DR. EDWIN R. WATSON (Macon): Dr. Burgess has discussed a subject of vital interest to those who treat children and, incidentally, a condition of childhood that occasionally proves baffling. I heartily agree with his statement that removal of tonsils and adenoids often results in cure, but we should be hesitant in promising cures, for not infrequently the sinusitis persists. The presence of nausea and vomiting upon arising in the morning often is due to accumulation of sinus drainage during the night. Anorexia and malnutrition may be prominent symptoms. The presence of chronic cough suggests the possibility of sinusitis. I have had some success with the Proetz routine when dealing with cooperative cases and feel that parents can be taught to employ it at home.

I should like to ask Dr. Burgess to say a word about surgery in the treatment of paranasal sinus infection in children as it relates to growth and development. I should also like to have him comment upon the use of nose drops and the damage that results from their use by pediatricians. If Dr. Burgess is not opposed to nose drops, I should like to hear from others who have viewed the dreadful rhinologic complications due to limited use of appropriate nose drops and to have them suggest more appropriate therapy.

Dr. Boswell has presented an excellent discussion of pediatric immunologic procedures. There is little I can add and, to borrow a legal phrase, only one dissent; namely, that in my very limited experience the use of pertussis hyperimmune serums are not disappointing in the treatment of pertussis if given in adequate dosage. The reactions to pertussis hyperimmune serums from other than human sources can be avoided through use of human serum. I should like to ask Dr. Boswell if possibly a low dosage might explain the failure of pertussis hyperimmune serum.

I dare not suggest an immunization schedule because this is largely an individual choice, but attention should be focused upon recent studies concerned with response to pertussis antigens by infants less than 3 months of age. I am convinced that pertussis antigens should be the first immunization administered and that it need not be combined with other antigens at such an early age.

With regard to usual reactions to immunization, I am never influenced by parental solicitude when better results are to be had. Local and systemic reactions to pertussis antigens cause a higher immunologic response; therefore reactions are not necessarily undesirable. I would urge the use of intradermal typhoid vaccine to reduce reactions and warn against use of influenza virus in children except with great caution. The use of scarlet fever toxin is in my opinion without value, irrespective of reactions, because it does not protect against infection.

DR. W. C. THOMAS (Brunswick): I think these discussions are a lot more fun if we can disagree with the essayists.

I think Dr. Burgess's paper is very interesting. One thing he did not take up is infancy, the beginning of life. I see a great many infants two or three weeks old that have sinusitis. I do not call it sinus infection; I call it sinus disease. I do not know what causes it, but I know that two or three nasal cleanings will cure the baby of its nasal condition and will cure the

mother of the nervous disability that she has had since the birth of the child.

The size of the sinuses at birth is very small, and the opening into the nose is proportionately large. That has been an interesting thing to me in infants with sinus infection—that is, in older infants, six to eight months old, the swelling of the turbinates closes off the ethmoid cells, although there is a large meatus. The closing of the meatus turns the ethmoid cells into a large cavity, which simply needs to be cleaned out.

Both of my predecessors said that tonsil operation will cure some cases, but tonsil removal does not cure them all. Diseased tonsils should be removed; and, as Dr. Burgess said, an infected antrum should be cleaned out at the same time. You will be amazed, if you put these children to sleep and put an aspirating needle into the antrum, how many infected antrums you will find.

In my experience nearly all coughs in children can be attributed to paranasal-sinus infection. One indication is the persistent cough. If it is due to something else, your common cough remedies will do more good than if it is a sinus cough.

Several years ago I had a spell of making autogenous vaccine for every nasal case I saw. Of course, a great many of them took two or three doses and did not come back. I had my shelf filled with autogenous vaccines for several patients. Occasionally I get a patient who does not want to put out the ten dollars for an autogenous vaccine. Then I take my ten or twelve bottles of vaccine, mix them up, and give it; I call it home-grown autogenous vaccine. I find I get better results than with real autogenous vaccine.

DR. TAYLOR S. BURGESS (Closing): With regard to surgery in these children, I find the surgery divided into two groups. I do not call it radical or simple, but destructive and non-destructve. Destructive surgery is removal of tissue. Such operations should be approached with a great deal of fear and trembling in children, because it is very easy to remove too much tissue and get a great deal of scarring and get a dry, crusty nose which the person will carry as long as he lives. The other type of surgery, which consists of enlarging the openings, does no harm. It causes a little more reaction and not as much disturbance as tonsillectomy does. That type of surgery I do not hesitate to do.

With regard to nose drops, I think they are very satisfactory if used in a child that has definite acute rhinitis. Any child that requires their use as a regular thing should be studied very thoroughly.

Any child in whom you suspect a sinusitis should have a thorough examination and x-ray studies. I also like to take an x-ray three or four months later and follow it up.

DR. W. C. BOSWELL (Closing): Of course, the immunization of the infant of 2 or 3 months is highly desirable, since they are in direct contact with their older brothers and sisters who contract the disease either in school or in other public places, and also because pertussis is so severe and so often fatal in these very young children. In New Orleans a great deal of work has been done in trying to immunize these young infants—published reports on this work are in a way disappointing. However, it was apparently proven that, although very few of these infants were absolutely protected, the mortality rate was practically nil as compared to the mortality in an unvaccinated control group. A stimulating or booster injection of vaccine should be given at the age of 8 or 9 months. I would advise the use of alum precipitated vaccine on account of the relatively small volume of vaccine necessary for each injection.

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**The Ninety-Eighth Annual Session of the Medical Association of Georgia will be held in Atlanta, April 27-30, 1948. Make your hotel reservations immediately.**

## GEORGIA'S HOSPITAL CONSTRUCTION PROGRAM

JOHN E. RANSOM, *Director*
*Division of Hospital Services*
*Georgia Department of Public Health*
*Atlanta*

The State Board of Health, the officially designated agency for the administration in Georgia of the Federal Hospital Survey and Construction Act, popularly known as the Hill-Burton Act, has adopted a State Hospital Plan or Program. This plan is based on a statewide survey of need for hospital facilities of various types and an inventory of existing facilities. It follows a general pattern set out in the Federal Law and the regulations which the law empowered the Surgeon-General of the U. S. Public Health Service to prescribe. The survey, financed in part by a Federal grant, was made by the Georgia Department of Public Health.

The primary objective, the attainment of which the plan was devised to secure, is the development of such additional hospital facilities as may be needed to provide adequately for the people of Georgia. These needed facilities are in the following categories: general hospital beds, hospital beds for tuberculous, mental and chronically ill persons, and public health centers. There can hardly be an accurate and universal standard by which the number of hospital beds requisite to adequacy can be determined. However, there are criteria on which the Surgeon-General could prescribe the number of beds in each category which should be a measure of sufficiency for purposes of allocating funds for the construction of additional facilities. The regulations he issued prescribed the following ratios:

*Table I*

*Type of Facilities — Ratio*

General Hospital Beds—4½ per thousand population

Mental Hospital Beds—5 per thousand population

Chronic Disease Hospital Beds—2 per thousand population

Tuberculosis Hospital Beds—2½ times average annual deaths from tuberculosis

Public Health Centers—Not more than 1 per 30,000 population.

The following table shows the number of beds needed in Georgia in each of these categories; the number of existing acceptable beds, as revealed by the survey; and the percentage of need met by existing facilities:

*Table II*

| Category | Existing Acceptable Beds | Number of Beds Needed | Percentage of Need Met |
|---|---|---|---|
| General | 6,906 | 13,898 | 50 |
| Tuberculosis | 2,338 | 3,297 | 71 |

| | | | |
|---|---|---|---|
| Mental | 9,351 | 15,440 | 61 |
| Chronic | 1.085 | 6,176 | 18 |
| Public Health Centers | 12 | 57 | 21 |

The plan provides that in developing hospital facilities with Federal aid, a reasonable balance among these several categories shall be maintained, but that during the first year special emphasis shall be given to general hospitals and public health centers. Tentatively, one-sixth of the first year's allotment has been ear-marked for public health centers.

In the general hospital category Georgia has a deficit of 6,992 beds. In order that available Federal funds should be used first in providing general hospital beds in those areas in which the need, as measured by the percentage of need met by existing facilities is greatest, the State was divided into twenty-nine hospital areas. These areas are of three types, as defined in the Surgeon-General's Regulations—base, intermediate, and rural, and from the basis for a coordinated hospital system which, if developed, can do much to improve hospital service throughout the State.

A base area is defined as follows: "Irrespective of the population of the area, it shall contain a teaching hospital of a medical school; this hospital must be suitable for use as a base hospital in a coordinated hospital system within the State." The Georgia plan provides two base areas, one containing the teaching hospitals of the Emory University Medical School, and the other, that of the School of Medicine of the University of Georgia.

An intermediate area is defined as "Any area so designated by the State Agency which: (1) Has a total population of at least 25,000 and (2) contains, or will contain on completion of the hospital construction program under the State plan at least one general hospital which has a complement of 100 or more beds and which would be suitable for use as a district hospital in a coordinated hospital system within the State." The Georgia plan designates six intermediate areas, the regional hospitals of which are located respectively in the following cities: LaGrange, Macon, Columbus, Albany, Thomasville, and Savannah.

A rural area is defined as "Any area so designated by the State Agency which constitutes a unit, no part of which has been included in a base or intermediate area. The State plan designates twenty-one such area consisting of two or more counties each and ranging in population from 138,305 to 16,575.

The boundaries of all these areas and the counties included in each are shown on the General Hospital Service Area Map accompanying this article.

Because of the fact that Federal aid, authorized by the Hospital Survey and Construction Act, becomes available in five annual allotments, it is necessary to determine in which areas the first year's allotment can be used as well as that for each of the succeeding four years. This has bene done by establishing priorities, giving highest priority to areas in which existing facilities are least in relation to need and arranging the twenty-nine areas in a table of descending priorities. Table III lists the areas, shows the percentage of need met, and the priority group into which each area falls.

*Table III*

*Relative Need Report*

| Priority | Area Designation (with included counties) | Percentage of Need Met |
|---|---|---|
| A | R-8 (Lamar, Pike, Upson) | 0 |
| A | R-15 (Greene, Taliaferro) | 0 |
| A | R-5 (Catoosa, Dade, Walker) | 11.29 |
| A | R-2 (Dawson, Habersham, Hall, Lumpkin, Rabun, Stephens, Towns, Union, White) | 27.52 |
| A | R-19 (Appling, Bacon, Coffee, Jeff Davis, Telfair) | 28.19 |
| A | I-1 (Heard, Meriwether, Troup) | 32.97 |
| A | R-18 (Emanuel, Montgomery, Telfair, Toombs, Wheeler) | 37.11 |
| A | R-7 (Carroll, Haralson, Paulding) | 38.81 |
| B | R-4 (Murray, Whitfield) | 41.67 |
| B | R-3 (Fannin, Gilmer, Pickens) | 42.11 |
| B | I-3 (Chattahoochee, Harris, Marion, Muscogee, Stewart, Talbot, Webster) | 42.72 |
| B | I-5 (Colquitt, Grady, Mitchell, Thomas) | 43.71 |
| B | R-1 (Banks, Clarke, Elbert, Franklin, Hart, Jackson, Madison, Oconee, Oglethorpe) | 44.60 |
| B | I-4 (Baker, Dougherty, Lee, Worth) | 46.69 |
| B | R-10 (Calhoun, Clay, Early, Quitman, Randolph, Terrell) | 47.53 |
| C | R-20 (Atkinson, *Brantley, Charlton, Clinch, Lanier, Pierce, Ware) | 50.97 |
| C | I-2 (Bibb, Crawford, Houston, Jasper, Jones, Monroe, Peach, Putnam, Wilkinson) | 51.85 |

* Western part of Brantley County is in area R-20, with the eastern part in R-21.

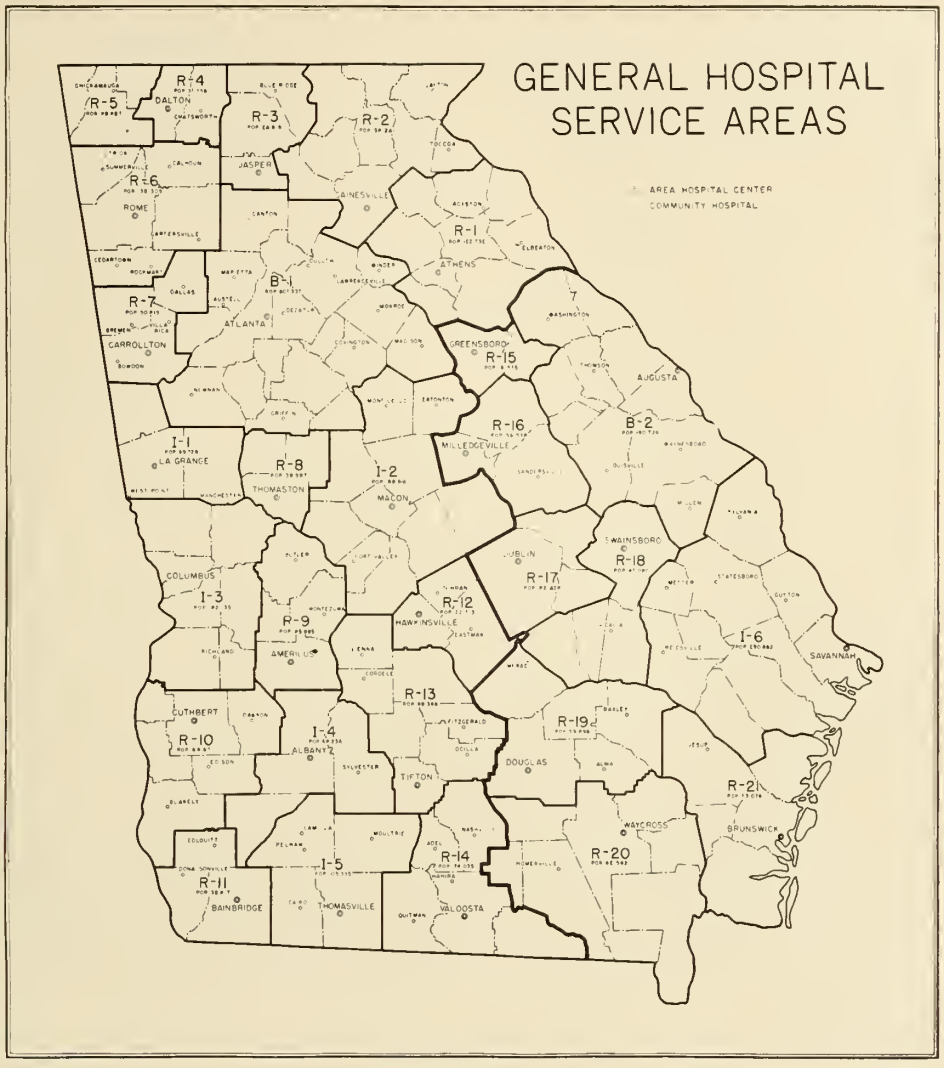



**Chart 1**
**General Hospital Service Areas**

| | | | |
|---|---|---|---|
| C | R-17 (Johnson, Laurens, Treutlen) | 56.05 | |
| C | R-14 (Berrien, Brooks, Cook, Echols, Lowndes) | 58.08 | |
| C | R-13 (Ben Hill, Crisp, Dooly, Irwin, Tift, Turner, Wilcox) | 59.34 | |
| C | B-2 (Burke, Columbia, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Warren, Wilkes) | 59.50 | |
| D | R-6 (Chattooga, Bartow, Floyd, Gordon, Polk) | 61.46 | |
| D | I-6 (Bryan, Bulloch, Candler, Chatham, Effingham, Evans, Liberty, Long, Screven, Tattnall) | 61.59 | |
| D | B-1 (Barrow, Butts, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Morgan, Newton, Rockdale, Spalding, Walton) | 68.04 | |
| D | R-12 (Bleckley, Dodge, Pulaski) | 72.83 | |
| D | R-9 (Macon, Schley, Sumter, Taylor) | 72.97 | |
| D | R-11 (Decatur, Miller, Seminole) | 73.40 | |
| D | R-16 (Baldwin, Hancock, Washington) | 73.96 | |
| D | R-21 (*Brantley, Camden, Glynn, McIntosh, Wayne) | 89.07 | |

At the ratio of one public health center per each 30,000 population, Federal aid is available in the construction of one hundred three (103)

such centers. Our survey showed that we now have twelve acceptable centers. The tentative plan for the construction of needed additional centers includes forty-five centers in a similar number of health districts and one hundred sixteen auxiliary centers. The priorities of these projects has been based on the population of the districts; the higher priority being given to the district with a smaller population.

However, it is evident that other factors must be taken into consideration in determining public health center priorities. A study of these factors is now being made in order that an equitable basis for such priorities may be established.

At the time this article is being written a Project Construction Schedule is in preparation. This schedule will list first all general hospital projects in "A" priority areas which are able to start construction before July 1, 1948. If the total Federal aid applied for by the sponsors of these "A" priority projects is less than the total first year allocation of Federal funds ($2,978,400 less one-sixth or $496,400 = $2,482,000) projects in "B" priority areas in sufficient number to require the balance of the year's allotment will be included in this schedule.

The sponsors of all projects included in this first construction schedule have made or may make application for Federal aid in the construction and equipment of their proposed hospitals in the amount of one-third the cost thereof, exclusive of the cost of the site and of any off-site improvements. Such applications are made to the State Board of Health and if approved by that body are then submitted by it for final approval to the Surgeon-General of the U. S. Public Health Service.

The more important conditions which a project must meet in order to qualify for Federal aid are:

1) It must be needed, as evidenced by the fact that provision has been made for it in the State plan.

2) Its sponsors must give acceptable assurance that two-thirds of the construction costs are or will be available from other than Federal sources and that funds to meet those costs are in the form of cash or other tangible assets.

3) Contracts for construction must be let on the lump sum (fixed price) basis, on a competitive bid basis, contractors being required to post performance bonds to carry specified types of insurance during the life of their contracts and to furnish weekly payroll reports showing wages paid to all different types of mechanics and laborers employed on the project.

4) Prevailing wage rates in the area in which the project is located, of all mechanics and laborers employed, as certified by the Federal Secretary of Labor, must be paid.

5) The sponsors of a project must give assurance that the services of the facility will not be denied to any resident of its area on account of race, creed or color and that a reasonable amount of free service will be available for persons unable to pay therefor.

6) Plans and specifications for the facility must be in accordance with the construction standards prescribed by the Surgeon-General.

On the date this aritcle was completed, (January 15, 1948) the first application was approved by the State Agency and forwarded to the District Office of the U. S. Public Health Service. This application was for the construction of a hospital in Carrollton, Carroll County, the estimated cost of which is $375,000 of which sum a $125,000 Federal grant has been applied for.

As to mental hospital beds, the State plan recommends that hospital facilities for patients with acute mental illness be established in connection with general hospitals in base and intermediate areas, and particularly that such units be provided in teaching hospitals. Acute mental hospital facilities are specifically recommended as parts of the area hospital centers in Atlanta, Augusta, Columbus, LaGrange, Macon, Albany, and Savannah.

In the chronic disease category it is likewise recognized that provision can best be made for long-term-illness patients in units connected with general hospitals. The State plan recommends that the establishment of such units in connection with general hospitals in Atlanta, Savannah, Augusta, Macon, and Columbus be given encouragement. The first facility in this category to be constructed with Federal aid will be Augusta-Aidmore, sponsored by the Crippled Children's League of Georgia. It will be located on a site on the campus of the Medical School of the University of Georgia, and in close proximity to the University Hospital.

When the facilities of Battey Hospital are fully developed and placed in service, there will probably be little or no need for additional beds for patients with early tuberculosis. Consequently, the only apparent present need is for the development of local facilities for the care of such advanced cases as are ineligible for care at the Battey Hospital.

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## EYE BANK

Another miracle of medical science taking place throughout the country from day to day is the restoration of sight to the blind. The Eye Bank for Sight Restoration, Inc., located in New York City, patterned after the more familiar blood bank, plays an important part.

People donate their eyes, usually at their death. The cornea, which is the transparent part in front of the eye ball, is removed immediately under surgical conditions. The doctor of medicine obtains the cornea from the Eye Bank and uses it to replace the same window portion in his paitent's eye, thus enabling him to see.

Before the Eye Bank was established, the surgeon had to wait until he had a suitable donor lined up. When fewer surgeons knew how to perform the operation, the demand for eye donors was not as great. Today, with many more possessing this knowledge and with more becoming trained in ophthalmic surgery, there is greater demand for the eye tissue.

With the Eye Bank furnishing eyes to all parts of

the country through its regional branches, (one is now located in Chicago to serve the midwest), it is now unnecessary for the patient to travel great distances in order to have the operation performed.

The Eye Bank also is working out a sound research program. Young American and European doctors of medicine who have specialized in treatment of the eyes can find tools at the Eye Bank to begin their study of corneal transplantation. At the Eye Bank they keep in touch with the latest technical advances.

Some day medical scientists may find a way to preserve eyes, but at this time only fresh tissue is usable for the delicate transplanting operation. The supply available rests entirely on the collections made throughout the country each day.

## PERIODIC DISEASE PRESENTS PUZZLE TO MEDICAL INVESTIGATORS

The mystery of periodic disease—symptoms of unknown origin which last several days and recur for years at remarkably regular, short intervals—is reviewed in the January 24 issue of *The Journal of the American Medical Association*. The author is Hobart A. Reimann, M.D., Philadelphia, from the Jefferson Medical College and Hospital.

Dr. Reimann reports the cases of six patients with periodic diseases who are still under observation, comparing them with 22 cases reported by other doctors. Twenty-one of the 28 were men patients. Although the symptoms differed—fever and abdominal pain were apparently among the most common—all cases shared the following features:

1. There were periods of temporary disability, recurring for years with predictable accuracy and uniformity, followed by intervals during which the patient felt well.
2. No cause for the condition could be discovered.
3. The interval between attacks was about seven days or some multiple of seven.

Referring to the last feature, the writer comments:

"Some, so inclined, may attach mystic significance to this, particularly in respect to the age-old importance associated with the numeral seven and of the numerous allusions to it. It was suggested that a latent or overt cyclic rhythm of this duration in mankind led to the establishment of the seven day week not on an astrologic or religious basis, but as the projection of a physiologic periodicity."

Dr. Reimann concludes that these cases "may be unrelated medical curiosities, or more probably, some of all of them may have a common underlying basis to weld them as a syndrome of periodic disease with different manifestations. It is important to know that such benign periodic conditions exist in order to protect the victims from unnecessary diagnostic expense and discomfort and from the hazards of unnecessary therapeutic and surgical procedures."

## METHODS OF AVOIDING AIRSICKNESS AND EARACHE IN LONG PLANE FLIGHTS

In answer to a query, the January 24 issue of *The Journal of the American Medical Association* offers several suggestions on how to avoid airsickness and earache during plane flights:

"To avoid ear discomfort due to inadequate eustachian tube ventilation, avoid flying during a common head cold or an active allergic rhinitis (inflammation of the mucous membrane of the nose). When the ears feel full during ascent or descent, swallowing a few times ordinarily relieves this feeling. If stuffiness is not relieved, chewing gum and attempting to yawn may succeed in opening the tubes.

"The upright position with the head slightly extended on the neck favors opening of the tubes. If this is unsuccessful, close both nostrils and puff out the cheeks.

"If trouble is anticipated, either a henzedrine or a tuamine inhaler may be used to contrict the nasal and nasopharyngeal mucosa about 20 minutes before descent. Opening of the tubes either by swallowing or by autoinflation is thereby facilitated. On some of the planes the stewardess is prepared to furnish a small balloon with a nasal tip for this purpose. The balloon is inflated with one nostril while the other is held closed. If simple inflation of the balloon doesn't open the tubes, the swallowing act is then carried out, the inflated balloon still being connected to the nose.

"Airsickness can sometimes be prevented by atropine-like drugs taken an hour or two before the plane trip."

## VICTIMS OF NAZI MASS STERILIZATION MAY HAVE FERTILITY RESTORED

Mass sterilization as practiced by the Nazis was not so effective that surgeons cannot restore fertility to a certain proportion of the men, according to Vincent J. O'Conor, M.D., Chicago, from the Departments of Urology of Wesley Memorial Hospital and Northwestern University Medical School.

In the December 17 issue of *The Journal of the American Medical Association* Dr. O'Conor states that he has successfully performed this restorative operation on nine out of 14 patients who had previously been surgically sterilized. Questionnaires sent to 1,240 recognized specialists revealed that 135 of the 750 who replied had performed the operation a total of 420 times, with at least 160 known successes. In 31 other cases the patients had not been examined after the operation, but their wives had become pregnant. Furthermore, 55 cases of surgical sterilization were reported in which fertility was supposed to have returned without any operation having been performed.

These facts led Dr. O'Conor to the conclusion that the operation may be successfully accomplished in from 35 to 40 per cent. "In view of this study the pessimistic outlook for relief of the vasectomized younger men in Europe should be revised and surgical aid offered to those persons who request it," he writes.

## HEALTHGRAMS

The Greek death rate from tuberculosis is reported to be between 250 and 450 per hundred thousand of population as compared with 40 in the United States. J. A. M. A., July 26, 1947.

* * *

Poverty causes illness, and illness, in turn, is a major cause of poverty. This vicious circle has long been recognized. It has also long been appreciated that it may be broken by social-economic measures, income, and living standards, and by medical care competent to lower the incidence and severity of disease. Medicine in the Changing Order, Rep. N. Y. Acad. Med. Comm., The Commonwealth Fund, 1947.

* * *

When a physician encounters an infant or child with a positive tuberculin test, he has six clear-cut responsibilities: he must classify or describe the lesion, judge activity, determine communicability, seek the source of infection, make recommendations for therapy based on specific objective data and, last, follow each patient carefully at frequent intervals at least until all evidences of activity have subsided or until resolution of the initial lesion is complete. R. V. Platou, Am. Rev. of Tbc., April, 1947.

* * *

A $10,000 athletic field for patients in the Veterans Administration hospital at Northport, N. Y.—built with donations obtained by the hospital's voluntary service committee—is nearly ready for use. VA said.

The field, completely fenced in and equipped with bleachers, contains space for softball and baseball, in addition to numerous play areas.

* * *

Chaplains in the Veterans Administration hospital at Oteen, N. C., converted an old three-tray dish cart, formerly used to wheel meals to bedridden patients, into a portable altar used for religious services in the wards.

The cart has been covered with drapes and equipped with a portable communion set, supplied by VA to all its hospitals.

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# A. M. A. TAKES POSITIVE ACTION IN PROVIDING HEALTH SERVICES

*Says Needs of American People for Medical Service Can Best Be Met on Local, Non-Compulsory Basis*

American ideals of freedom "will be most certainly maintained when the needs of the American people for medical service are met on a local community and state basis rather than on a system centrally controlled," states an editorial in the January 17 issue of *The Journal of the American Medical Association.*

The editorial follows:

In his address to the Congress, made January 7, President Harry S. Truman stated his objectives in the field of health in the following quotations:

The greatest gap in our social security structure is the lack of adequate provision for the nation's health. We are rightly proud of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they need.

I have often and strongly urged that this condition demands a national health program. The heart of the program must be a national system of payment for medical care based on well tried insurance principles. This great nation cannot afford to allow its citizens to suffer needlessly from the lack of proper medical care. Our ultimate aim must be a comprehensive insurance system to protect all our people equally against insecurity and ill health.

Then, following a discussion of education, he continued:

The government's programs for health, education and security are of such great importance to our democracy that we should now establish an executive department for their administration.

In the meeting of the house of delegates last week in Cleveland, the American Medical Association, through this policy-making body, reaffirmed its point of view in opposition to compulsory sickness insurance. The house of delegates received from the board of trustees a detailed statement indicating the progress that has been made toward achieving the objectives of the association's own 10 point national health program. Specifically, the ideals of freedom to which President Truman referred will be most certainly maintained when the needs of the American people for medical service are met on a local community and state basis rather than on a system centrally controlled.

Many millions of our citizens and their families are already protected against the costs of hospitalization and sickness by the Blue Cross Plans, the nonprofit voluntary plans for paying the costs of medical care, and the long established private insurance companies. Already the American people are far on the way toward meeting the President's standard of "a national system of payment for medical care based on well tried insurance principles." These are not, however, "compulsory." The President was apparently careful to avoid that odious word in his presentation, although he used it frequently in his previous message on health. There is not the slightest evidence that he has departed from his previous insistence on compulsory sickness insurance, federally administered, as his answer to the sickness problem.

Through its national health program, the American Medical Association is furthering the advancement of medical science by research, by the improvement of industrial health, by better and more widely available medical education, by the expansion of preventive medical services, by the fostering of new hospitals and health centers, and in many other ways. The answer of the medical profession has not been made in words alone but in positive action.

For many years the medical profession has favored assembling and coordinating all the health functions of our national government in a single agency with an administrative head in the cabinet. Apparently the President anticipates the enactment of legislation which will combine health, education and security in one federal department. Whether or not any or all of these would suffer in such a system remains to be seen. If health is, indeed, as many a great statesman has asserted, the first consideration of government, medicine as the profession responsible for this function of our civilization should not be asked to play a subsidiary role.

## HOOKWORM FROM PACIFIC ISLANDS MAY MIGRATE TO SOUTHERN U. S.

*Report One In 15 Servicemen Returned From Pacific Infected With Tougher Variety Of Hookworm Than That Of South*

There is danger that the tougher variety of hookworm found in the Pacific Islands may establish itself in southern states in which the American hookworm is already an unwelcome guest, two writers warn in the January 17 issue of *The Journal of the American Medical Association.*

As officers in the United States Naval Reserve, the writers, Elmer H. Loughlin, M.D., Brooklyn, and Norman R. Stoll, Sc.D., Princeton, N. J., worked in United States Naval Medical Research Unit No. 2. Dr. Loughlin is now at the Long Island College of Medicine, Brooklyn, and Dr. Stoll at the Rockefeller Institute for Medical Research. They state that of servicemen returning from the Pacific one in 15 has been reported infected with a species of hookworm which presents a greater public health problem than the shorter, more slender species now established in the southern United States. It is more harmful to its host, resists treatment more stubbornly, and its larvae can survive under less favorable climatic conditions.

Larvae of both varieties of hookworm live in the earth in hot, humid climates. They gain entrance to the human digestive tract either directly, through contaminated food or water, or indirectly, by way of the skin of the feet or legs. Hookworm infection results in gastrointestinal disturbances, abdominal pain, a fever that comes and goes, progressive anemia, pallor and emaciation. The majority of the servicemen whose infections were discovered did not show conspicuous symptoms, however, and so many similar cases must have gone untreated.

Unsuspecting hookworm carriers may establish soil infections in suitable climates if their hygienic habits are not of the best. The two writers fear that southern ex-servicemen, returning from the Pacific without their infections having been detected and treated, may do just that.

"Analysis of hookworm infections carried by American servicemen from the South suggests the continuation into young adulthood (18 to 29 years) of faulty hygienic habits acquired in childhood," they write.

## HEART DISEASE STILL LEADING CAUSE OF DEATH AMONG DOCTORS

*Journal Obituaries Show Fewer Physicians Died In 1947 Than In 1946, However; Average Age Was 66.7*

Fewer physicians died in 1947 than in 1946, on the basis of the obituaries published in *The Journal of the American Medical Association* during the year. According to the January 24 issue of *The Journal*, physician deaths numbered 3,040 in 1947 as compared to 3,358 in 1946 and 2,962 in 1945. During 1947, however, the American Medical Directory Report Service received reports of deaths of 3,568 physicians in the United States and possessions, or 528 more than those published in *The Journal.*

The average age of the 3,040 whose obituaries were published was 66.7 years as compared to 66.1 in 1946 and 65.3 in 1945. As in previous years, the age group between 70 and 74 showed the highest number of deaths: 548. Two physicians lived to be more than 100 years old. The number by age groups compares favorably with 1946 except in the 30 to 34 age group, where 43 deaths were recorded during 1946 as compared to 65 during 1947.

Diseases of the heart continued as the leading cause of death among physicians, with a total of 1,406 recorded. Coronary embolism, throm-

bosis and occlusion led the heart group with 677 as compared to 738 for 1946. Deaths from angina pectoris and other coronary diseases in 1947 showed an increase of 106 to 125; deaths from diseases of the myocardium and pericardium increased from 123 to 152, and deaths from other diseases of the heart increased from 375 to 432. There was a notable decrease in chronic valvular disease and rheumatic heart disease from 28 in 1946 to 10 in 1947.

Cerebral hemorrhage, thrombosis and embolism took the lives of 384 physicians. Arteriosclerosis caused 252 deaths, an increase of 67 over 1946. Hypertension, hypertensive cardiovascular disease and cardiorenal disease contributed to 162 deaths, an increase of 71 over 1946.

Diseases of the respiratory system caused 168 deaths, and 319 others were attributed to cancer and tumors. There were 49 deaths from diseases of the nervous system, 132 from diseases of the digestive system. Chronic nephritis or uremia was the commonest cause of death among diseases of the genitourinary system, with 109 recorded.

The suicide rate decreased: 40 were recorded, as compared to 55 during 1946. Seventeen suicides were attributed to bullet wounds, seven to poisoning, four to cut arteries, three to drugs, two each to hanging and gas and one each to anesthesia, jumping and burning to death; in two the method was unspecified.

There were five homicides, all due to shooting. Two physicians were killed by unknown assailants, one in a holdup, one by cattle thieves and one by his patient.

Of the 159 accidental deaths, 68 involved automobiles. Five were collisions with trains, one a collision with a streetcar. Thirteen died in airplane crashes; nine were drowned, one when his fishing boat went over a dam. Six died of burns. One physician was killed when his tractor toppled down an embankment, and two died in the Wynecoff Hotel fire in Atlanta, Ga.

Among the decedents were two former vice-presidents of the American Medical Association and one trustee. Of the four council members, one had been a chairman. Eight had been section officers, two had served on the judicial council and 30 had been members of the house of delegates. In the total number were 34 who had been presidents of state medical societies and one president-elect; 221 were or had been presidents of county medical societies as compared to 216 for 1946.

Decedents included 239 who had been teachers in medical schools. Ten had been deans, and 167 were professors as compared to 122 in 1946. There were 106 members of boards of education, 193 health officers, 102 members of boards of health, 18 city councilmen, 53 coroners, 41 mayors, 25 authors, 22 legislators, 30 pharmacists, 20 editors, 18 bank presidents, nine missionaries, nine police physicians or surgeons, four postmasters, village presidents and dentists, respectively, and two sheriffs. One had been a lawyer and one a justice of the peace.

Twenty-four physicians had been members of the U. S. Public Health Service, 21 with the Public Health Service Reserve, 13 in the Indian Service and 10 with the Veterans Administration.

Reports of physicians killed in action and dying in military service during the second World War continued to be cleared through official military channels. Thirty-three were reported killed in action as compared to 40 in 1946. Nine died in the South China Sea when the Japanese ship on which they were being transported as prisoners to Japan was sunk Oct. 24, 1944. Other locations of death listed were in the Philippines, four; the Pacific, four; aboard ship, four; two each in Germany and Okinawa; one each in Dutch New Guinea, Iwo Jima, Guadalcanal, Java, Netherlands and North Africa.

Thirty-four of the physicians whose deaths were reported in *The Journal* died while in military service as compared to 128 in 1946.

The average age of the physicians killed in action was 31.9 years as compared to 35.2 in 1946, and of those who died in military service, 37.1 years as compared to 42.8 for 1946. Deducting the military deaths, the average age at death of the remaining physicians is 67.5 years for 1947, the same as for 1946.

This brings the total deaths of physicians recorded in *The Journal* since the outbreak of the second World War on Dec. 7, 1941, to 290 killed in action and 535 who died while in military service, or a total of 825 military deaths. Others are in process of being cleared through official military channels and await publication.

## MOST PSYCHOSOMATIC PATIENTS FEAR CURE MORE THAN DISEASE

### *Doctor Cites Many Ways In Which Patients With Psychosomatic Illness Resist Or Sabotage Treatment*

One should suspect that a disease is psychosomatic when a patient shows signs of sabotaging his own cure, writers Andrew D. Hart, M.D., Charlottesville, Va., a member of the Department of Internal Medicine of the University of Virginia School of Medicine, in the January 17 issue of *The Journal of the American Medical Association.*

A psychosomatic disease is one in which organic changes arise from the ways in which the patient reacts to personality conflict and insecurity. Yet "patients with psychosomatic disease may show little or no evidence of emo-

tional instability." Dr. Hart points out. This, he says, adds to the doctor's difficulty in diagnosis only if he fails to recognize that the outward symptoms of psychosomatic illness are valuable to the patient precisely because they substitute for a more open expression of inner conflicts which the patient feels inadequate to face. He has learned to live with illness; he has not learned to live with himself.

"Although an ill person must consciously and rationally attempt to seek relief for manifest symptoms and disability, there are unconsciously motivated resistances to such attempts that block their success. Indeed, it might be expected that every dynamic resource of the organism would be called into action to protect the illness and maintain its expressions until the greater threat to personality security had been lessened or resolved," Dr. Hart writes.

Among the many ways in which such patients resist cure, he mentions the following:

1. Procrastination in seeking medical attention. "Patients with psychosomatic complaints are seldom seen early in the course of their illnesses."

2. Self treatment. "Many patients indulge in self diagnosis and protracted self treatment, despite the availability and rationale of adequate medical care. . . . It is perhaps the most reliable characteristic of patients with psychosomatic illness that in submitting to medical care they reserve for themselves a greater independence of action in decisions as to choice of procedure and detail of treatment."

3. Sabotage of treatment: "Broken diets, renewed habits, unfilled and unopened prescriptions, forgotten medications, fractured routine and disregarded advice."

4. Broken appointments. "In many instances only an initial appointment is kept and it is apparent that the person has acquiesced in consulting the physician as a gesture only and is not seriously entertaining plans for treatment."

5. Medical shopping. "Numerous physicians are consulted one after another without giving any of them a satisfactory opportunity for systematized investigation of the illness."

6. Limitation of treatment. "In spite of the presence and persistence of general symptoms, a single major complaint is assumed by the patient to be the only significant abnormality; particular treatment for it is undertaken year after year, to the vigorous exclusion of more complete investigations."

7. Patronage of cults: "A willingness to accept lay advice, hopeful reliance on patent remedies, an enthusiasm for medical fads and support of the cults. There is an inappropriate bent and loyalty to methods and systems that temporize with illness through policies of suggestion, reassurance and palliation."

8. Vagueness and evasiveness in the recital of complaints.

9. Excessive preoccupation with irrelevant detail.

10. Complacency, "particularly if the disease has progressed to some tangible and socially recognized pattern of structural defect." This is particularly noticeable in cases of obesity caused by overeating.

11. Relief of tension and anxiety following the development of unmistakable physical symptoms and tangible structural defect.

12. Hypersensitiveness and intolerance to personality study.

13. Denial of significant personality insecurity or conflict.

14. Misleading explanations of the causes for obvious worry and distress.

15. Claims of improvement or cure after treatment with remedies that could, at best, offer only temporary benefit.

"Many patients appear to give up their resistance or to succumb to cumulative pressures for study and treatment only when, through alteration of internal or external factors in the basic insecurity situation, a resolution of the total illness is impending," Dr. Hart concludes.

"On the other hand, patients who injudiciously allow external pressures to force them into premature or hasty treatment and decision may become seriously anxious and depressed unless illness equivalents have been effectively established. A physician-patient relationship may constitute such a substitution and in competent treatment should serve as a bridge to the development of other identifications compatible with reeducative goals and health."

## TRANSFUSIONS BLAMED FOR INCREASE IN DISEASE OF BLOOD INCOMPATIBILITY

An apparent increase in the incidence of erythroblastosis, a combination of jaundice and anemia due to blood incompatibility which kills about 50 per cent of the infants born with it, is probably due to transfusions of Rh-positive blood given to Rh-negative women. This is the conclusion of an article appearing in *The Journal of the American Medical Association* for December 10.

The writers, L. M. Hellman, M.D., and G. R. Vosburgh, M.D., Baltimore, from the Department of Obstetrics of the Johns Hopkins University School of Medicine and the Johns Hopkins Hospital, point out that there are only two ways by which a woman whose blood is Rh-negative (about 15 per cent of all women are in this group) can acquire enough Rh antibodies in her bloodstream to give birth to an erythroblastotic child. The first of these is by repeated bearing of Rh-positive children—and the majority of her children will be Rh-positive if she is married to an Rh-positive man. In such an event her first and often her second child will be spared, however.

The second means by which such a woman

may become sensitized is by the administration of an Rh-positive blood transfusion. "Women so sensitized produce Rh-positive children with the severest form of erythroblastosis who usually do not survive," the doctors write.

At the Department of Obstetrics of the Johns Hopkins Hospital there was only one case of erythroblastosis in 1,732 deliveries in 1937, the doctors also report, while in 1946 the incidence was one in 348 deliveries. "Such a phenomenon may well be related to the increasd incidence of transfusion known to have taken place," they observe.

A history of previous transfusion occurs in but two per cent of all Johns Hopkins patients, yet in 27 instances of erythroblastosis a history of transfusion was present in seven women or 26 per cent. Two other Rh-negative women had also received blood transfusions which gravely jeopardized their subsequent childbearing careers, although the infants safely born to them at Johns Hopkins happened to be Rh-negative because their Rh-positive husbands carried one Rh-negative gene.

"With the increased use of transfusion the chance of unwittingly administering Rh-positive blood to Rh-negative women is definitely increased," Dr. Hellman and Dr. Vosburgh conclude. "Since such transfusions may be disastrous to future childbearing, even though many years may intervene, they can only be regarded as reprehensible; and in our opinion a high degree of negligence may be charged if transfusion is ever given to a female child, or women in the childbearing age, without first determining the Rh compartibility. In cases of dire emergency when time does not permit Rh determinations, only Rh-negative blood should be given."

### SKIN COMPLAINTS OFTEN FIRST SIGNS OF UNDERLYING MENTAL DISEASE

Certain skin complaints often are among the first signs of an underlying mental disease, according to two Chicago doctors, Theodore Cornbleet, M.D., and Meyer Brown, M.D., from the Department of Dermatology of the University of Illinois College of Medicine and the Department of Nervous and Mental Diseases of Northwestern University Medical School.

Writing in the January 17 issue of *The Journal of the American Medical Association*, the writers observe that disturbed sensations of the skin which cannot be traced to any rational source should always be suspected. Some of the most common of these are intense itching which develops suddenly, a feeling of numbness, tingling, burning, drawing, heat or cold, a sensation of insects crawling or of droplets falling on the skin.

An actual skin disorder may sometimes be accounted for by excessive washing or cleansing of the skin which springs from a delusional idea, the doctors point out. Unreasonable concern over the appearance of some simple condition such as a few additional facial hairs or moles or increased dryness or oiliness of the skin, as well as complete indifference to serious skin disease, also may indicate that a psychiatrist's services are needed. Excessive sweating, feelings of warmth, blanching or flushing or blushing may or may not be part of a set of psychiatric symptoms. More obvious are bizarre delusions involving the skin and self-induced injuries.

## MRS. EDGAR D. SHANKS PASSES; WAS GEORGIA'S FIRST WOMAN ANESTHETIST

Mrs. Edgar D. Shanks, 58, wife of one of the State's best known physicians and Georgia's first woman anesthetist, died Jan. 26, 1948, at her home, 1431 Fairview Road, N. E., Atlanta, after an illness lasting a year.

Born Zola Lucretia Thomas, the daughter of the late James B. and Elizabeth McCulloch Thomas of Botetourt County, Virginia, she graduated as a nurse from Home and Retreat Hospital, Lynchburg, Virginia, and later studied anesthesiology at the Mayo Clinic, Rochester, Minnesota, under the guidance of Drs. William J. and Charles H. Mayo, whom she assisted in many of their difficult operations.

Coming to Atlanta in 1913 as the chief anesthetist at Henry Grady Memorial Hospital, she became Georgia's first woman anesthetist. After two years' work at Grady, where she was influential in interesting other women in the profession of anesthesiology, she accepted a similar position at Georgia Baptist Hospital, where she remained till America participated in the First World War. With the organization of the Emory University Hospital Unit for service in that war, she was requested to join the unit as a civilian and to accompany it to France. In France she was assigned to a surgical team which worked at the various hospitals near the front line.

After the war was over she returned to her home at Buchanan, Virginia, to await the arrival from Europe of Dr. Edgar D. Shanks, also in the U. S. Army, whom she was to wed and with whom she worked at Grady Hospital in earlier years. With her marriage in July, 1919, Mrs. Shanks retired from the field of anesthesiology, but in recent years joined with her husband in



MRS. EDGAR D. SHANKS

sponsoring a memorial to the late Dr. Crawford W. Long, of Jefferson, Georgia, discoverer in 1842 of ether as an anesthetic. This memorial will be erected some time in the future under the auspices of the Medical Association of Georgia.

Mrs. Shanks returned to Atlanta in 1919 and had lived there continuously since that time. While her first interest was her family and home, she took an active part in the social, cultural and educational activities of her community and State. Always believing in hard work and the simple life, with honesty of purpose for all, her work in schools, in her church, in medical and in civic organizations, was directed toward a better community and State for all the people. She was an avid reader of editorial comment in local papers and national magazines. She was a member of the Druid Hills Presbyterian Church, the Woman's Auxiliary to the Fulton County Medical Society and the Woman's Auxiliary to the Medical Association of Georgia.

Besides her husband, immediate survivors are: a daughter, Miss Zola Thomas Shanks, Atlanta, and two sons, Dr. Edgar D. Shanks, Jr., a medical officer of the U. S. Army, now on duty with the 28th Station Hospital of the Far East Command, Osaka, Japan, and Mr. James Zachry Shanks, a student at Washington and Lee University, Lexington, Virginia. Other survivors are: five sisters, Mrs. Mary Thomas Brand and Miss Bessie M. Thomas, both of Buchanan, Virginia; Mrs. Bittle Cline, Salem, Virginia; Mrs. Charles L. Smith, Galax, Virginia; and Miss Alma Thomas, Knoxville, Tennessee; one brother, Mr. Robert E. Thomas, Covington, Virginia; an aunt, Mrs. G. M. McCulloch, Bluefield, West Virginia; and several nieces and nephews.

Funeral services for Mrs. Shanks were held at Spring Hill, Atlanta, Jan. 28, 1948, Dr. Wallace Alston officiating. Interment was in West View Cemetery, Atlanta.

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OBITUARY

*Dr. Alex Eckel Bryan Alford*, aged 72, prominent surgeon and physician, died in a Bainbridge hospital, after an illness of several months, January 14, 1948. Dr. Alford was born in Greensboro, N. C. He graduated from the New York Medical College, Flower and Fifth Avenue Hospitals, New York City, in 1909, and went to Bainbridge and opened a hospital on Shotwell Street in what is now known as the S. W. Martin home. In 1917 he founded the Bainbridge Hospital and was active until a year ago, when he retired due to ill health. Dr. Alford was one of the most popular physicians in the entire section of Bainbridge. He gave of his time and money to worthy causes, charities, and the advancement of the city and county. He was a member of the Decatur-Seminole Counties Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. He is survived by his sister, Mrs. H. E. Balance, Longwood, Fla. Funeral services were held at the E. W. Cox Funeral Home with the Rev. Olin C. Cooper, pastor of the First Methodist Church, officiating. Burial was in the Oak City Cemetery, Bainbridge.

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*Dr. Elliott L. Baker*, aged 73, prominent physician and surgeon, died at his residence, 1021 Lockwood Drive, Columbus, January 10, 1948. Dr. Baker was born in Antioch the son of the late Mr. and Mrs. James P. Baker. He graduated from the Atlanta Medical College, now Emory University School of Medicine, Atlanta, in 1895. He did research work at Mayo Clinic, Rochester, Minn., Johns Hopkins, Baltimore, Md., and Jefferson Hospital, Philadelphia, Pa. He was a member of the First Baptist Church, a Mason, Shriner, Elk, and a veteran of World War I, serving with the rank of captain. Surviving are his widow, Mrs. Mabelle Lester Baker; one daughter, Mrs. J. J. Knight, Jr., Norfolk, Va.; one son, George M. Baker, Birmingham, Ala.; three sisters, one brother, one granddaughter, and several nieces and nephews. Funeral services were held at the residence in Columbus, with the Rev. H. C. Hodges, Atlanta, officiating. Burial was in River View Cemetery, Columbus.

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*Dr. George W. Heriot, Sr.*, aged 80, prominent Savannah physician for almost half a century, died January 4, 1948. Dr. Heriot was a native of Liberty County and graduated from Atlanta Medical College, now Emory University School of Medicine, Atlanta, in 1895. He entered the practice of medicine at Jewell, Hancock County, Ga. in 1895 and four years later moved to Savannah. A man of many fine qualities, Dr. Heriot was held in high regard by all who knew him, and took a keen interest in civic and political affairs and

was always a booster of his adopted city. He once served as city physician and played a large part in the development of the southern section of Savannah. Surviving him are his wife, Mrs. Eva Hardwick Heriot; three sons, Theodore B., Robert L., and Julian C. Heriot; two daughters, Mrs. Thomas Bacot, and Mrs. Aubry K. Sessons; fifteen grandchildren and by four great-grandchildren. Funeral services were held from Sipple Chapel with Dr. John S. Wilder, pastor of Calvary Baptist Temple, and the Rev. L. G. Cliverdon, pastor of the First Baptist Church officiating. Burial was in Bonaventure Cemetery, Savannah.

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*Dr. David G. Miller*, aged 84, retired general practitioner of Doraville, died January 20, 1948. Born at Norcross, Dr. Miller was graduated from the University of Georgia School of Medicine, Augusta, in 1887. He was a member of the Doraville Associated Reformed Presbyterian Church. Surviving are his wife, and a daughter, Miss Lillian Miller, of Doraville. Funeral services were conducted at the Doraville Presbyterian Church with the Rev. W. P. Grier and the Rev. John Moore officiating. Burial was in the Presbyterian Churchyard, Doraville.

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*Dr. Frederick Bangs Rawlings, aged* 59, senior surgeon of the Rawlings Sanitarium, Sandersville, died January 16, 1948. Dr. Rawlings was a graduate of the University of Pennsylvania School of Medicine, Philadelphia, Pa., in 1915. Following the death of his uncle, Dr. William Rawlings, founder of the Rawlings Sanitarium, he assumed charge of the institution with three staff physicians. A veteran of World War I, Dr. Rawlings served overseas with the Emory Unit. He was a member of the Phi Delta Theta fraternity; the Washington County Medical Society, which he had served as president; the Medical Association of Georgia; the Southern Medical Association; the Southeastern Surgical Conference; a fellow of the American College of Surgeons; and a fellow of the American Medical Association. He is survived by his wife, Mrs. Mary Hardwick Rawlings; his stepmother, Mrs. B. Rawlings; one brother, Dr. William Rawlings, Sandersville; two sisters, Mrs. Thomas W. Gilmore, and Mrs. C. W. Gunnels, Washington, D. C. Funeral services were held from the Sandersville Methodist Church with the Rev. H. C. Shearhouse, the Rev. E. G. Orahood, and the Rev. Jackson Harris officiating. Burial was in the City Cemetery, Sandersville.

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*Dr. Benjamin Franklin Williams*, aged 64, of 490 North Ave., N. E., Atlanta, died January 8, 1948. Dr. Williams, a graduate of Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1910, practiced medicine in Bremen, Barnesville and Atlanta. His postgraduate work was done in Chicago, Ill., and Mayo Clinic, Rochester, Minn. He was a member of the Bremen Baptist Church, Bremen, and the Masons. Survivors include his wife, the former Miss Margaret Gray of Atlanta; a daughter, Mrs. James Routh, Atlanta; sons, B. F. Williams, Jr. and R. L. Williams, both of Atlanta; mother, Mrs. J. S. Williams, Atlanta; a sister, four brothers, three grandchildren and several nieces and nephews. Funeral services were held at the chapel of Awtry & Lowndes with Dr. Wallace Rogers officiating. Burial was in Greenwood Cemetery, Atlanta.

## AMERICAN ACADEMY OF PEDIATRICS

The areal meeting of the American Academy of Pediatrics will be held at the Statler Hotel, Buffalo, New York, April 29th to May 2nd, 1948.

Members of State medical societies are welcome to attend. The registration fee will be $5.00 for such non-members together with a $5.00 registration for which each registrant receives a ticket to the banquet, making a total registration fee of $10.00.

Registration may be made ahead of time by writing to Dr. C. C. Grulee, Secretary-Treasurer, American Academy of Pediatrics, 636 Church Street, Evanston, Illinois, enclosing a check for $10.00, or registration may be at the time of the meeting.

## POSTGRADUATE COURSE IN ELECTRO-CARDIOGRAPHY MAY 17 TO 21, 1948

Emory University School of Medicine announces a five-day intensive course presenting a comprehensive survey of electrocardiography.

Emphasis will be placed on the clinical interpretation of the electrocardiogram in the light of modern excitation theories and the newer technics in electrocardiography. The uses and interpretation of multiple chest leads, unipolar leads, the ventricular gradient and variation in normal patterns will be stressed.

In addition to the Emory University faculty, guest speakers who will participate in the program are:

Dr. George Burch, Professor of Medicine, Tulane University of Louisiana Medical School, New Orleans, Louisiana.

Captain Ashton N. Graybriel, Medical Corps, U. S. N. Coordinator of Aviation Medicine and Research, Naval Air Station, Pensacola, Florida.

Registration fee—$40.00.

Make application to: Director, Postgraduate Education, Emory University School of Medicine, 36 Butler St., S. E., Atlanta 3, Ga.

## NEWS ITEMS

Dr. Thomas E. Bailey, a native of Augusta, who for several years has been away, has returned to begin the practice of medicine, with offices in the Shirley Apartments, 315 Tenth Street, Augusta. Practice limited to pediatrics. Dr. Bailey graduated from the University of Georgia School of Medicine, Augusta, in 1939, interning and serving as assistant in surgery at the Macon Hospital, Macon, after graduation. He spent five years in the Army, serving three years in the Asiatic-Pacific theater of operations. While in the Army he attended the Army Field Service Medical School at Carlisle Barracks, Pa., and the School of Tropical Medicine, Sydney University, Sydney, Australia.

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Dr. Franklin Burroughs, Danielsville, announces the opening of offices for the practice of medicine in the offices formerly occupied by the late Dr. W. D. Gholston in Danielsville.

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The Crawford W. Long Memorial Hospital, Atlanta, staff dinner meeting was held in the dining room of the hospital, Jan. 13, 1948. Program: "Cancer of the Face and Mouth," by Dr. Calvin B. Stewart. Medical section meeting was held in the medical library with round table symposium, "The Psychosomatic Aspects of the Gastrointestinal Tract," led by Dr. Carl Whitaker, Assistant Professor of Psychiatry at Emory University. Surgical and pediatric section meetings were held in the clinic reception and the clinic lecture rooms.

* * *

Dr. Horace Darden, Sparta, oldest practicing physician in Sparta and Hancock County and also the oldest living graduate of the University of Georgia School of Medicine, Augusta, celebrated his 91st birthday January 13, 1948. He made his usual rounds to see his patients, driving his automobile as usual. Mrs. Darden celebrated her birthday later the same week. They still keep house, where their many friends and relatives called to congratulate them. Congratulations Dr. and Mrs. Darden!

* * *

Dr. M. A. Ehrlich, Bainbridge, recently attended the third annual meeting of the Southeastern Allergy Association at Richmond, Va., where he presented a paper entitled, "Ascaris Asthma".

* * *

The Fulton County Medical Society held its forty-third anniversary banquet at the Biltmore Hotel, Atlanta, January 15. Program: Installation of Officers: Dr. Walter W. Daniel, president, succeeded Dr. R. Hugh

Wood, who was presented with a President's key. Dr. Stephen T. Brown, president-elect; Dr. Bernard P. Wolff, vice-president; Dr. A. Worth Hobby, secretary-treasurer; and Dr. A. O. Linch, chairman of the board of trustees. Twenty-five year certificates were awarded to Drs. M. Hines Roberts, J. H. Kite and William F. Lake. The L. C. Fischer awards for the most original scientific paper went to Drs. Osler A. Abbott and William A. Hopkins, and for the best written paper to Dr. A. Worth Hobby. Dr. O. O. Fanning, who has been ill for several years, was given a standing ovation. Dr. Dewey T. Nabors was chairman of the committee which arranged the annual banquet.

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Dr. John D. Campbell, Atlanta, announces the association of Dr. Joseph D. McElroy in the practice of neuropsychiatry, 355 Doctors Building, Atlanta. Dr. McElroy graduated from University of Georgia School of Medicine, Augusta, in 1941. After serving four years in the U. S. Navy he recently completed a postgraduate course in neuropsychiatry at St. Elizabeth Hospital, Washington, D. C.

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The annual banquet to the medical and surgical staff by the Georgia Baptist Hospital was held in the Nurses' Home dining room, Atlanta, January 20. Program: Dr. Major F. Fowler, presiding; Invocation, Dr. B. L. Shackleford; Report of secretary for 1947, Dr. A. M. Dimmock; Report of administrator, Edwin B. Peel; Comments by retiring president, Dr. Major F. Fowler; Announcement of staff appointments for 1948-49, James W. Merritt, secretary hospital commission; Comment by incoming president, Dr. L. H. Muse; Dr. Wm. G. Hamm, secretary.

* * *

The Georgia Medical Society held its meeting at the society's hall, 612 Drayton Street, Savannah, January 13. The society voted to hold a joint session with the First District Medical Society on February 24. Dr. Monroe J. Epting presided as the new president, succeeding Dr. J. C. Metts. Program: "Review of the Ethics of the Medical Profession," by Dr. M. J. Egan, who declared that "Medical ethics are nothing more or less than the principle of fair play." Dr. Lawrence Lee read from an original printing of ethical principles as adopted by the society in February, 1821. Dr. L. M. Friedman arranged the program. Dr. S. J. Lange, secretary.

* * *

The Atlanta Postgraduate Medical Assembly, sponsored by the Fulton County Medical Society and the Fifth District Medical Society, was held at the Baltimore Hotel, Atlanta, January 27-30. Fifteen eminent specialists lectured at the assembly. Dr. Rufus F. Payne, superintendent of Battey State Hospital, Rome, was the only Georgian on the program. Other speakers were: Drs. Chester Keefer, Helen Taussig, Lester B. Dragstedt, M. C. Sosman, Roy R. Kracke, Julius Lempert, A. A. Weech, Ralph M. Tovell, Phil S. Hench, Robert Elman, George Preston, A. C. Ivy, E. Von Haam, and Tom D. Spies. Physicians from the Southeastern states attended.

* * *

Grady County Board of Health is seeking a successor to Dr. Arthur W. Hill, health commissioner for the Grady-Thomas health unit, who has resigned to accept a position in the Institute of Inter-American Affairs as director and adviser to the Colombian Ministry of Health in South America, with offices at Bogota, Columbia, S. A. Great strides forward in health work in the two counties have been made. Notable projects include the mass TB-VD surveys in the two counties in which some 25,000 persons received free tests, with treatments where incidence was found.

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Dr. Mark Dexter Hollis, formerly officer in charge of malaria control of the U. S. Public Health Service, Atlanta, has been named Assistant Surgeon General, with headquarters in Washington, D. C. Dr. Hollis, while in Atlanta, developed a program for the control of malaria, typhus, and other diseases spread by insects. He is a native of Buena Vista, and was graduated from the University of Georgia Engineering School in 1931.

* * *

Dr. G. Lombard Kelly, dean of the University of Georgia School of Medicine, Augusta, recently attended the twenty-first annual meeting of the National Conference on Medical Service, Palmer House, Chicago. The Council on Medical Education, the Association of American Medical Colleges and Hospitals, and the Federation of State Boards of Medical Examiners participated in the meeting.

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Dr. Philip I. Krugman, Atlanta, announces the opening of his office for the practice of obstetrics and gynecology, 727 West Peachtree St., N. W., Atlanta.

* * *

The International and Fourth American Congress on Obstetrics and Gynecology sponsored by the American Committee on Maternal Welfare, Inc., 24 West Ohio Street, Chicago, will be in the nature of an international congress on obstetrics and gynecology, and will take place May 14-19, 1950 at the Hotel Pennsylvania in New York City.

* * *

Dr. Elisabeth Martin, Atlanta, has worked unselfishly for patients at the Florence Crittenton Home during the past five years. This work recently won recognition as she was named Woman of the Year of Atlanta in the professions. In naming Dr. Martin Woman of the Year in Professions, the judges declared: "She has the highest professional standing. Her services are in great demand, yet without any compensation she looks after the obstetrical work at the Florence Crittenton (for unmarried mothers)." Dr. Martin has delivered more than 300 babies at the home and has been on call day and night, because, as she puts it, "Babies don't arrive by appointment."

* * *

Dr. Barton A. McCrum, Decatur, has been appointed chief resident physician of the obstetric and gynecologic department at Crawford W. Long Memorial Hospital, Atlanta, according to a recent announcement. He graduated from Emory University School of Medicine, Atlanta, in 1944 and received his commission in the Navy at the same time. After serving an internship at Portsmouth, Va., Dr. McCrum was a ship's physician in the Pacific theater. Returning to Decatur he became a member of the staff of Crawford W. Long Memorial Hospital, specializing in obstetrics and gynecology.

* * *

Dr. D. F. Mullins, Jr., Athens, passed the October 1947 examinations of the American Board of Pathology and is now a diplomate of the American Board of Pathology. Dr. Mullins recently resigned his position as assistant professor of pathology, Louisiana State University School of Medicine, New Orleans, La., and is now director of the Laboratory of St Mary's Hospital and Athens General Hospital, Athens.

* * *

Dr. James J. Clark, Atlanta, recently attended the annual meeting of the Radiological Society of North America at the Statler Hotel, Boston, Mass.

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The Georgia Medical Society held its regular meeting at the society's hall, 612 Drayton Street, Savannah, January 27. Discussion: "Roentgenology as an Aid in Obstetrics," by Dr. David Robinson. Amendment of Article V of By-Laws regarding annual dues. Dr. S. J. Lange, secretary.

* * *

Dr. Ralph H. Chaney, Dr. Peter B. Wright, Dr. W. J. Williams, Dr. G. Frank Jones and Dr. W. W. Battey, Augusta physicians, recently attended the sectional meeting of the American College of Surgeons held in Atlanta. At the meeting, Dr. Wright, who is professor of orthopedic surgery at the University of Georgia School of Medicine, Augusta, presented a paper entitled "Management of Certain Complicated Fractures of the Upper Extremity." He was the only Georgia physician on the program which included discussions

from medical experts throughout the nation. Dr. Battey is a councilor for the Georgia State Executive Committee, American College of Surgeons. Prior to attending the Atlanta meeting, Dr. Wright attended a meeting of the American Academy of Orthopedic Surgeons, Chicago.

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Dr. J. H. Kite, Atlanta, recently attended the Duval County Medical Society, Jacksonville, Fla., where he presented a paper, "Errors in Diagnosis and Management of Orthopedic Patients Before They Come to the Orthopedist," illustrated with 100 slides.

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Dr. E. V. Patrick, formerly of Jackson, announces the opening of his offices for the practice of medicine at Carrollton. Dr. Patrick, a graduate of University of Georgia School of Medicine, Augusta, served as a captain in the Army Medical Corps during the war and was recently discharged. Dr. Patrick joins the Carrollton medical group just after two physicians, Dr. Steve Worthy and Dr. L. J. Roberts left to take advanced and special work at health centers. The people of Carrollton are planning to erect a 100-bed hospital.

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Dr. Mason I. Lowance, Atlanta, attended the meeting of the American Academy of Allergy recently held at St Louis, Mo., where he was elevated from a member to a fellow. Dr. Lowance will serve another year as regional secretary of the organization.

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Dr. James W. Stapleton, native of Stapleton, has moved to Thomson to establish his medical practice. He is a graduate of the University of Georgia School of Medicine, Augusta, in the class of 1939, and was resident surgeon for three years at the Hillman Hospital, Birmingham, Ala. He served in the medical corps of the Army during World War II, commissioned as first lieutenant in 1944, and attained the rank of major prior to his separation from service in July 1947. Dr. Stapleton will occupy the offices formerly used by Dr. Roy Johnson, Jr., who has moved to Fitzgerald to practice medicine.

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Dr. J. Victor Roule, Augusta, was re-elected chairman of the Richmond County Board of Health for another four-year term at the board's first 1948 meeting.

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The Ware County Medical Society met at the Ware Hotel, Waycross, January 2. Dr. C. A. Witmer and Dr. Floyd Davis were hosts to the medical society members at dinner. Dr. F. G. Eldridge of Valdosta was guest speaker of the society and discussed "X-ray Diagnosis of the Gallbladder and Gastrointestinal Tract." Dr. L. W. Pierce, secretary-treasurer.

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Dr. S. M. Withers, Moultrie, announces the removal of his offices to the Powell Building, Moultrie.

* * *

Dr. L. E. Williams, Cordele, was re-elected chairman of the board of the Crisp County commissioners for the beginning of the 13th year. He has been a member of the Crisp County commissioners for 26 years and is recognized as the dean of Georgia commissioners—having served longer than any other commissioner in the state. Dr. Williams is a member of the State Board of Managers of the Georgia County Commissioners Association from the Third District of Georgia. He was recently accorded state recognition for his service to the people of Crisp County.

* * *

Dr. Edward S. Wright, Atlanta, announces that he has returned to private practice after taking special work with Dr. Julius Lempert, New York City, in fenestration surgery of the ear for improvement of hearing in selected cases, 410 Medical Arts Building, Atlanta. Otolaryngology, bronchoesophagology, aural fenestration surgery.

* * *

Dr. J. Benham Stewart, formerly of Milledgeville and Lumber City, announces the opening of his offices, 211-212 Doctors Building, Macon. Practice limited to general surgery.

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## COUNTIES REPORTING FOR 1948

### *Bartow County Medical Society*

President—W. E. Wofford, Cartersville
Vice-President—Wm. B. Quillian, Jr., Cartersville
Secretary-Treasurer—A. L. Horton, Cartersville
Delegate—George Cauble, Cartersville
Censors: H. B. Bradford, S. M. Howell, and Wm. B. Quillian, Jr.

### *Crisp County Medical Society*

President—C. E. McArthur, Cordele
Secretary-Treasurer—O. T. Gower, Jr., Cordele
Delegate—P. L. Williams, Cordele
Alternate Delegate—C. E. McArthur, Cordele.

### *Dougherty County Medical Society*

President—A. E. James, Albany
Vice-President—G. E. Seymour, Albany
Secretary-Treasurer—Paul T. Russell, Albany
Delegate—W. M. Field, Albany
Alternate Delegate—W. S. Cook, Albany
Censors: J. A. Redfearn, J. M. Barnett, and J. C. Keaton

### *Elbert County Medical Society*

President—J. E. Johnson, Jr., Elberton
Vice-President—D. N. Thompson, Elberton
Secretary-Treasurer—John B. O'Neal, III, Elberton
Delegate—A. S. Johnson, Elberton
Alternate Delegate—F. A. Smith, Elberton
Censors: A. S. Johnson, Sr., G. A. Ward, and W. A. Johnson

### *Forsyth County Medical Society*

President—Courtney C. Brooks, Cumming
Vice-President—Marcus Mashburn, Jr., Cumming
Secretary-Treasurer—James S. Mashburn, Cumming
Delegate—Marcus Mashburn, Sr., Cumming
Alternate Delegate—Rupert H. Bramblett, Jr., Cumming

### *Glynn County Medical Society*

President—J. B. Avera, Brunswick
Vice-President—H. M. Coe, Brunswick
Secretary-Treasurer—Haywood L. Moore, Brunswick
Delegate—B. W. Harris, St. Simons Island
Alternate Delegate—S. P. McDaniel, Brunswick
Censors: Thos. W. Collier, S. P. McDaniel, and L. C. Mitchell

### *Gordon County Medial Society*

President—W. D. Hall, Calhoun
Vice-President—J. E. Billings, Calhoun
Secretary-Treasurer—R. D. Walter, Calhoun
Delegate—W. D. Hall, Calhoun
Alternate Delegate—J. E. Billings, Calhoun

### *Hancock County Medical Society*

President—Horace Darden, Sparta
Secretary-Treasurer—H. L. Earl, Sparta
Delegate—C. S. Jernigan, Sparta

### *Macon County Medical Society*

Secretary-Treasurer—Thos. M. Adams, Montezuma

### *Mitchell County Medical Society*

President—James C. Pirkle, Pelham
Vice-President—C. A. Stevenson, Camilla
Secretary-Treasurer—D. P. Belcher, Pelham
Delegate—J. C. Brim, Pelham
Alternate Delegate—M. W. Williams, Camilla

### *Randolph-Terrell Medical Society*

President—Walter D. Martin, Shellman
Vice-President—Ernest F. Daniel, Dawson
Secretary-Treasurer—W. G. Elliott, Cuthbert
Delegate—J. C. Tidmore, Dawson
Alternate Delegate—Robert B. Quattlebaum, Fort Gaines
Censors: F. S. Rogers, J. C. Tidmore, and A. R. Sims

### *Richmond County Medical Society*

President W. J. Williams, Augusta
Vice-President—J. D. Gray, Augusta
Secretary-Treasurer—Chas. M. Mulherin, Augusta
Delegate—R. C. McGahee, Augusta
Delegate—Geo. W. Wright, Augusta
Alternate Delegate—M. Preston Agee, Augusta
Alternate Delegate—C. Monroe Templeton, Augusta

***Walker-Catoosa-Dade Medical Society***
President—C. W. Stephenson, Ringgold
Vice-President—Dennis M. Cornett, LaFayette
Secretary-Treasurer—Roy Pope, Jr., Chickamauga
Delegate—Fred H. Simonton, Chickamauga
Alternate Delegate—H. F. Shields, Chickamauga
Censors: L. L. Alexander, Frank L. O'Connor, and S. B. Kitchens

## YOUR SKIN

"Beauty is skin deep" is almost true. It depends however on what layer of skin you refer to. The outer layer of the skin, called the cuticle, is the only section "beautified," according to a HEALTH TALK issued by the Educational Committee of the Illinois State Medical Society.

The skin is an active organ of the hody. In most adult animals, it is the largest organ in mass (with the liver ranking second). Like other organs, it is composed of living tissue and it is affected by all the agents which affect other parts of the body—nutrition, for instance, or exposure, chemicals, infection, heat, cold, irradiation. As an organ, too, it has specific functions—to contain the other organs and the fluids of the body, to carry the nerves with which we maintain our contact with the outer world, to help regulate temperature, to protect the hody against infection, to mirror disease within the body, for example. Its role as a thing of beauty is, in nature, relatively unimportant, though it would be difficult to make many women believe that.

Like other organs, too, the skin is nourished, repaired and maintained in normal conditon by materials brought to it by the blood—the same matcrials which nourish the heart, brain, liver, muscles and the rest. Moreover, the blood is the only agent delivering such materials to the skin. The skin is "fed" from the inside, not from the outside. Beauty is only skin deep, but it comes from within.

If the body is in good condition generally, the skin is good, for the blood flows freely through its supply arteries with all the materials it needs for good health. If the body is in poor condition, it will be reflected in the skin. That is why, beyond good general health, nearly all that can be done for the skin is to keep it clean.

Actually the skin is made up of three layers—the cuticle or outer skin, the second layer or true skin, and the third deep layer in which lie the blood and lymph vessels. The outer skin is constantly renewing itself, dead cells scaling off and being replaced with new material pushing up from beneath. This function is illustrated on a large scale in the peeling that follows sunhurn.

To clean the skin means, in addition to removing dirt, to speed up the removal of the dry, dead cells hy the application of soap and water or, in women, by some cleansing cream, an oily material which leaves the surface soft and smooth. Shaving achieves a similar effect in males. The massage effect involved in rubbing on the grease is stimulating to the blood supply, which may exert a beneficial effect.

There are many medical conditions that affect the skin, causing sallowness and a worn-out, drab look, or producing redness, pallor, various rashes and other symptoms. Symptoms of allergy often appear in the skin and some of them are due to the ingredients of cosmetic prcparations.

However, proper diet, sufficient exercise, adequate rest and personal cleanliness are a team of beauty aids that have no competition.

For that deft touch, that added bit of color, enhance your natural beauty with the cosmetics suited to you. For irregularities of the skin or its related organs, such as the hair, see your doctor. Do not entrust yourself to unskilled beauty operators for anything more than surface manipulations. Medical literature shows that wrong treatment can do serious harm.

## STREPTOMYCIN AND SULFADIAZINE USED TOGETHER IN BRUCELLOSIS

*Patient Ill For Months Recovers Promptly When Two Combined In Treatment; Neither Effective Alone*

How combined treatment with streptomycin and sulfadiazine brought about complete recovery in an unusually stubhorn case of human brucellosis (undulant fever) is reported in the December 20 issue of *The Journal of the American Medical Association* by C. Wesley Eisele, M.D., and Norman B. McCullough, M.D., from the Department of Medicine, School of Medicine, University of Chicago.

Thc case suggests that an effective treatment for this baffling disease, which in the United States is exceeded in importance by only three other communicable diseases—tuberculosis, syphilis and gonorrhea—may at last have been found.

Brucellosis is transmitted to humans by contact with diseased hogs, goats or cows, or by drinking the milk of infected animals. In its acute form the symptoms may easily he confused with those of typhoid fever, acute tuberculosis, malaria, acute rheumatic fever, influenza and other diseases; in its chronic form, which is much more common, the disease is even harder to diagnose. Relapse and recurrence of symptoms even after apparent recovery are common. In the early days of the sulfonamide compounds and of streptomycin, enthusiasm for their efficacy in treatment ran high, but neither drug by itself proved particularly effective against the bacteria of brucellosis except in the test tube.

In the case cited by the writers, an acutely ill patient was hospitalized five months after he had begun to have daily attacks of chills, fever and dizziness. A diagnosis of undulant fever was made, and he was given penicillin and blood transfusions. He improved enough to leave the hospital after 10 weeks, but shortly afterward he was admitted to another hospital with a high fever and other symptoms. In spite of prolonged steptomycin treatment his blood tests remained positive for the bacteria of brucellosis, and after three months there was no improvement.

Finally a 28-day course of sulfadiazine treatment was started. The patient still showed no improvement until streptomycin was combined with the sulfadiazine during the last 10 days. After termination of this combined treatment hlood tests for the bacteria of brucellosis were negative for the first time, and the patient's fever dropped and remained around normal. He recovered completely, and after 17 months had had no relapse.

## MINERAL OIL DECREASES CAROTENE IN BLOOD PLASMA, MAY HARM LIVER

It is doubtful whether mineral oil can be used safely, year in and year out, either as a fat-substitute in foods, as a remedy for constipation, or in weight-reducing diets. Evidence as to its dangers is reviewed in an editorial appearing in the October 25 issue of *The Journal of the American Medical Association.*

"The use of mineral oil in foods such as imitation mayonnaise or salad dressing increased during the war because of the shortage of biologic fats and oils," the editorial says. "Such food substitutes are used extensively also in weight-reducing diets. Previous reports concerning the interference of mineral oil with the absorption of fat-soluble vitamins, particularly vitamin A and its precursor, carotene, were based mostly on animal experiments in which large quantities of mineral oil were used, compared with what would ordinarily be taken by man. (Dr. A. C.) Curtis and his associates showed that the ingestion of mineral oil by human beings will prevent a rise in blood carotene consequent to simultaneous intake of foods rich in carotene; the subjects in this experiment were observed for only 15 days.

"Recently (Dr. B.) Alexander and his associates

made similar observations on human beings for three to eight weeks. . . . The decrease in plasma carotene was noted within one to two weeks; it progressed further in many cases as the intake of mineral oil continued. Neither significant changes in the plasma vitamin A nor untoward clinical manifestations occurrred. Since it is well known that the concentration of vitamin A in the blood remains relatively constant for as long as six months in normal persons subjected to restricted intake of vitamin A and carotene, a conclusion could not be drawn on these subjects with regard to the effect of mineral oil on the supply of vitamin A as such to the body. The conclusion, however, was that in man the simultaneous ingestion of mineral oil with food prevents substantial amounts of food carotne, a precursor of vitamin A, from entering the body.

"While many physicians believe that mineral oil is not absorbable and therefore can no do harm, some of it prescribed for constipation does pass through the intestinal wall and on into the liver. (Dr. W. C.) Alvarez reviewed the work of Frazer, Stewart and Schuman, who found that if mineral oil was ingested without previons emulsification only a small percentage of it was absorbed but that when given in the form of a fine emulsion, as many persons take it, about one half of it went through the wall of the bowel. These workers found also that the fine emulsification necessary for this process could be effected by a combination of bile salts, oleic acid and glyceryl monostearate which can be found in the bowel. When taken in the form of the clear oil much of it is emulsified in the stomach or bowel. Frazer and associates demonstrated such absorption through the intestinal mucosa of rats histologically, biochemically and by actually counting the tiny oil droplets found in the blood, which could be easily seen in the cells of the intestinal wall. With a special chemical technic they found that from 35 to 60 per cent of the amount of emulsified oil was absorbed, an amount comparing favorably with the percentage of olive oil absorbed in control experiments. Stryker found in various experimental animals that the extent to which lesions appeared in the liver and lymph nodes was related to the time the animals had been given mineral oil. Rabbits fed mineral oil more than seven months showed numerous tiny white nodules in their intestinal wall, and vacuolization appeared in the mesenteric lymph nodes and liver. Similar changes were found in the tissues of men and women who were known to have used paraffin oil; in fact in 15 of 25 consecutive necropsies the lymph nodes revealed the presence of such droplets of oil.

"These observations raise the grave question, Alvarez says, whether mineral oil can be used safely, year in and year ont, as some persons use it; they also raise the question whether purveyors of food should ever be allowed to substitute mineral oil for the edible fats. The Council on Foods and Nutrition of the American Medical Association concluded in a report published in 1943 the indiscriminate use of mineral oil in foods and cooking is not in the interest of good nutrition and that any such use should be under careful supervision of a physician."

## HEALTHGRAMS

In 1893, Hermann M. Biggs, Commissioner of Health, New York City, required public institutions to report cases of tuberculosis and private physicians were requested to do so. In 1897 the sanitary code of the New York City Department of Health required that all cases of tuberculosis be reported. Life of Hermann Biggs, C.E-A. Winslow, Lea and Febiger, Phila., 1929.

* * *

The tuberculosis control program appears to have been quite successful among women so far as reduction of the death rate is concerned, while in the case of men the principal evidence of success has to do with the advancing age at death. Mary Dempsey, Am. Rev. Tbc., August, 1947.

* * *

A final diagnosis of tuberculosis should not be made on the first x-ray film, since a disturbing number of cases showing definite infiltrations of the lung fields will be found to have cleared completely on a re-examination two weeks later. Joseph D. Wassersug, M.D., N.E. Jour. Med., July 13, 1947.

* * *

Tuberculosis must unquestionably be recognized as the most serious public health problem among non-white races. Mary Dempsey, Am. Rev. Tbc., August, 1947.

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Tuberculosis is so deeply a personal disease that news of its tragic onset or advance can be more calmly accepted when the source of the news is the family doctor and not a stranger from a distant agency. Ed., Pub. Health Rep., December 6, 1946.

* * *

The tragedy today is not that research has failed to produce a panacea for tuberculosis but with shortage of beds and good houses we are unable to apply fully the knowledge already at our disposal. Archd. S. Hutcheson, M.D., NAPT Bull., February, 1946.

* * *

Humanity has always shunned responsibility. Even today, though there is widespread intellectual acceptance of the concept that much disease is preventable, the emotional attitude is not much altered and illness is considered an intrusion, a misfortune due to factors beyond control of the individual. As a whole we have not yet awakened to the idea that the health of men and women is their own responsibility. Edward J. Stieglitz, M.D., A Future for Preventive Medicine, The Commonwealth Fund, 1945.

* * *

It appears obvious that we have arrived at a point in this country where the dissemniation of bovine tuberculosis is no longer a matter of serious concern. H. M. O'Rear, D.V.M., Disease of the Chest, July-August, 1947.

* * *

The steadily increasing industrial employment of women in this country has not as yet been reflected in a higher tuberculosis mortality in women, even at the ages of highest susceptibility. Henry D. Chadwick, M.D. and Alton S. Pope, M.D., The Modern Attack on Tuberculosis, The Commonwealth Fund, Revised, 1946.

* * *

Cincinnati may be able to claim credit for having been the first American city to make tuberculosis a "reportable" disease. The distinction now is claimed by both Boston and St. Louis . . . In the annual report of the (Cincinnati) Health Department for 1897 is a copy of resolutions adopted by the Board of Health requiring physicians to report all cases of tuberculosis. This action is believed to antedate similar action in Boston and St. Louis. Ohio Pub. Health, October, 1947.

* * *

The basis for the concerted Scandinavian mass BCG vaccination is the importance tuberculosis plays even today as an endemic diseases—the commonest chronic disease in people between 15 and 30 years. Approximately 50 per cent of this age group do not react to tuberculin. These non-reactors have proved more susceptible to progressive tuberculous disease when infected than those in whom a positive tuberculin reaction indicates a previous infecton. Konrad Birkhaug, M.D., Am. Rev. Tbc., March, 1947.

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*The* JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

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# THE ROENTGENOLOGIC EXAMINATION OF THE SMALL INTESTINE

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Examination of the small intestine, if properly done, is one of the most difficult and time-consuming tasks which confronts the roentgenologist. It demands frequent roentgenoscopic observations during which an attempt is made to visualize and palpate every segment of the barium-filled bowel. In most cases three to eight periods of roentgenoscopy are required to examine the entire small intestine after the oral administration of opaque material. Lesions which are encountered must be recorded on roentgenograms often by means of "spot" roentgenography, and this adds to the difficulty of the task. In addition, the diseases which involve this segment of the digestive tract are relatively rare. The examination should not be used as a routine procedure. Instead, patients who are to be referred to the roentgenologist for investigation of the small intestine should be selected with great care.

In order to aid in the proper selection of such patients, the clinical manifestations of the more common lesions of the small intestine will be discussed, the frequency with which these lesions are encountered will be commented on, and the accuracy with which they may be found and identified by the roentgenologist will be noted.

Read before the Medical Association of Georgia, Augusta, April 24, 1947.

## *Enteritis*

Nonspecific regional enteritis is the most common inflammatory lesion of the small intestine. During the period between January 1, 1942, and January 1, 1946, 53 patients who suffered from this disease were operated on for the first time at the Mayo Clinic. Excluded from consideration for the purpose of this discussion are all patients who were subjected to a secondary type of operative procedure and all patients on whom no operation was performed.

The chief clinical manifestations of nonspecific regional enteritis as noted in this group of cases are listed in table 1. It will be seen that the passage of loose or watery stools, cramping abdominal pain and loss of weight were the most common expressions of this condition. Cramping pain or loose stools, or both, were present in all but 3 of the 53 cases.

An adequate roentgenologic examination of the segment of bowel which was involved was not obtained in 5 of the 53 cases. Of the 48 cases in which adequate roentgenologic examination was obtained a diagnosis of regional enteritis was made in 45 and of obstruction of the small intestine in one. In the two remaining cases, the diagnosis was erroneous, although a lesion was found. A correct diagnosis, therefore, was made in 95.8 per cent of the cases in this group.

Regional enteritis involves the terminal portion of the ileum most commonly but it may implicate any portion of the small in-

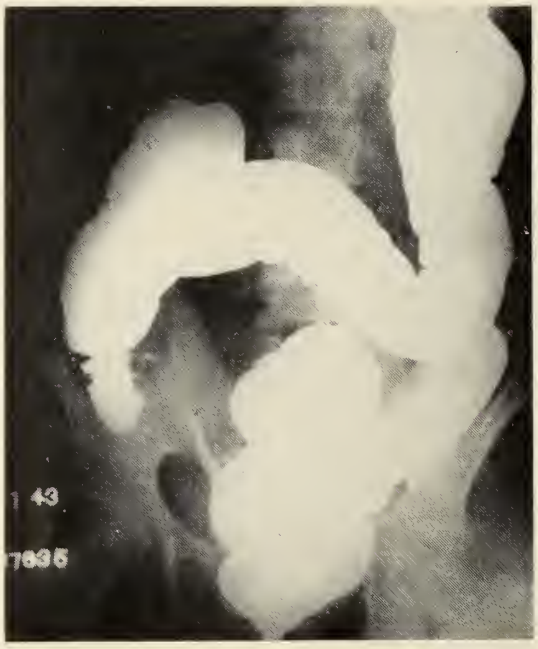


Figure 1. Nonspecific regional enteritis which involves the cecum and distal 12 inches (30.5 cm.) of ileum. Ileocecal fistula. (Case 1.)

testine. In four of the 53 cases in this group the jejunum was involved. In many instances the lesion extended beyond the ileocecal valve to involve the cecum and a portion of the ascending colon.

Enteritis due to tuberculosis has not been encountered frequently in our experience. It is difficult roentgenologically to distinguish this lesion from the nonspecific variety. The presence of an extra-alimentary focus of tuberculosis lends weight to a diagnosis of tuberculous enteritis when a lesion is found in the small intestine.

CASE 1. A married woman, 45 years of age, registered at the Mayo Clinic on Aug. 11, 1943. In July, 1940, while on a fishing trip, she began to pass fifteen to twenty watery stools each day. Often the stools contained undigested food, but at no time did she notice any blood, pus or mucus in them. The stools were seldom passed at night and rarely in the afternoon. Since the onset of her illness, the patient had consulted several different physicians, one of whom had told her that she suffered from ileitis. Between July, 1940, and August, 1943, she lost 73 pounds (33.1 Kg.).

On physical examination it was noted that the patient was emaciated. A tubelike mass, which was thought to be a portion of the intestine, was felt in the lower right quadrant of the abdomen. A roentgenogram of the thorax revealed no abnormality. Roentgenologic examination of the colon and terminal portion of the ileum by means of an opaque enema disclosed ulcerohyperplastic regional enteritis which involved the cecum and the terminal 12 inches (30.5 cm.) of the ileum. A roentgenogram made at this time is shown in figure 1.



Fig. 2. Nonspecific regional enteritis which involves the distal 17 cm. of ileum. Two ulcers were found in the cecum by the pathologist. (Case 2.)

Operation was advised and on Aug. 31, 1943, a segment of intestine, 105 cm. in length, was resected. This segment included the terminal portion of the ileum, the cecum and the ascending colon. Although the most severe disease was found in the terminal 15 cm. of the ileum the pathologist noted that there were several ulcers proximal to this region and beginning involvement of the cecum with the formation of an ileocecal fistula in the vicinity of the ileocecal valve.

CASE 2. A girl, 14 years of age, registered at the clinic on April 8, 1944. She had been well until January, 1944, at which time she began to lose her appetite. Soon after this she experienced attacks of vomiting associated with generalized cramping abdominal pain. These attacks usually occurred after a meal. She began to lose weight and by the time she was seen at the clinic she had lost more than 20 pounds (9.1 Kg.). It had been noted that her temperature rose to about 100° F. every afternoon.

The patient was pale and emaciated. A firm, round, slightly tender mass was felt in the lower right quadrant of the abdomen. There were no important laboratory findings other than moderate leukocytosis. A roentgenogram of the thorax revealed no abnormality. At the time of the roentgenologic examination of the colon a lesion was seen in the terminal portion of the ileum. The roentgenologist requested an opportunity to examine the small intestine and when this examination was made, the ileum for a distance of approximately 7 inches (17 cm.) in the vicinity of the ileocecal valve was found to be involved by hyperplastic regional enteritis (fig. 2).

Operation was advised and on April 24, 1944, a segment of intestine, 36 cm. in length, was resected. This consisted of the terminal portion of the ileum, the cecum and the ascending colon. The pathologist reported that the lesion was subacute enteritis with diffuse ulceration of the terminal 17 cm. of the ileum. The walls of the involved segment were thick and edematous and two ulcers were found in the cecum.

## *Tumors*

During the seven years from Jan. 1, 1939, to December 31, 1945 inclusive, 61



Fig. 3. (A) Carcinoma of jejunum. There is moderate obstruction with dilatation of the jejunum proximal to the lesion; (B) "spot" roentgenogram showing lesion in more detail; (C) photograph of segment of jejunum removed. (Case 3.)

patients were subjected to operation at the Mayo Clinic because of a tumor in the small intestine. The 35 cases encountered during the first three years of this period have been reported before.[2] The pathologic types of tumor which were seen and the frequency of their occurrence are listed in table 2. Eight of these lesions involved the duodenum, 34 the jejunum, and 19 the ileum. Twenty-two of the carcinomas and eight of the leiomyomas were situated in the upper portion of the small intestine.

The most important clinical manifestations in this group of 61 patients were (1) evidence of loss of blood, (2) presence of a mass in the abdomen and (3) evidence of partial intestinal obstruction. The incidence of these features, alone and in combination, is given in table 3. The passage of tarry or bloody stools, hematemesis or a value of hemoglobin of less than 12 Gm. in 100 cubic centimeters of blood are included in the group listed as "loss of blood." In the 5 instances in which the only indication of the tumor was a low value of hemoglobin, the highest value was 8.9 Gm. and the lowest was 5.5 Gm.

The most common clinical manifestation of a benign tumor was evidence of loss of blood while that of lymphoblastoma was evidence of intestinal obstruction. In the group of cases which included carcinoma and certain other malignant tumors the manifestations of loss of blood and of ob-




Fig. 4. (A) "Spot" roentgenogram of segment of jejunum showing two of the three intramural leiomyomas which were found by roentgenoscopic examination; (B) two of the three intramural submucosal leiomyomas. (Case 4.)

struction were noted with equal frequency.

Nineteen of the 61 patients who were operated on had not had complete roentgenologic examination of the small intestine. In 5 of these cases a diagnosis of intestinal obstruction was made from roentgenograms of the abdomen without the use of a contrast material. Evidence of intestinal obstruction or of an abdominal mass was present in 13 of the other 14 cases. In one case exploration was carried out because of a massive hemorrhage from the gastrointestinal tract.

In the 42 cases in which adequate roentgenologic examination of the small intestine had been done, the lesion was demonstrated at the time of this examination in 36 and overlooked in 6. A correct roentgenologic diagnosis was made in 85.7 per cent of the cases in this group.

Tumors of the small intestine usually are manifest in one of three ways; namely, (1) by producing obstruction, (2) by causing intussusception and (3) by producing a filling defect in the column of opaque material. Only in the last-mentioned instance is it possible for the roentgenologist to obtain sufficient information so that he can attempt to make a definite pathologic diagnosis. For this reason the following diagnoses were made by the roentgenologist in the 36 cases in which the tumor was found roentgenologically: carcinoma in 10 cases; ulcerating malignant lesion in 3 cases; intramural submucosal tumor in 7 cases; intraluminal polypoid lesion in 3 cases; intussusception in 5 cases; obstruction in 6 cases and lesion in 2 cases.

CASE 3. A married woman, 47 years of age, registered at the Clinic on Jan. 12, 1942. She complained of attacks of swelling of the abdomen associated with vomiting which had begun about six months before. For four months she had been treated for diabetes mellitus. She stated that in September, 1941, a swelling about 3 inches (7.6 cm.) in width, six inches (15.2 cm.) in length and 1/2 inch (1.3 cm.) in height had appeared in the region of the umbilicus. The swelling disappeared spontaneously but reappeared at intervals several times in a period of thirty minutes. Borborygmus and vomiting were also noted at this time. The patient consulted her physician who was unable to explain the nature of the attacks, although he found that she

suffered from diabetes mellitus. She had lost about 40 pounds (18.1 Kg.) during 1941.

Borborygmus was heard in the left side of the abdomen. No masses were palpated. The blood contained 7 Gm. of hemoglobin in 100 c.c. and, the feces, when tested with benzidine, showed the presence of occult blood. Roentgenologic examinations of the stomach and colon showed no abnormalities. On roentgenologic examination of the small intestine a tumor causing considerable obstruction was found in the upper part of the jejunum. This was thought to be a carcinoma. Roentgenograms made at this time are shown in fig. 3*a* and *b*.

Operation was advised and on Jan. 26, 1942, a portion of the jejunum 25 cm. in length was resected. In this segment was found an annular ulcerative adenocarcinoma, grade 2 (Broders' classification), which completely encircled the lumen of the intestine (fig. 3*c*).

CASE 4. A man, 45 years of age, first registered at the Clinic on April 27, 1943, because of two episodes of weakness, dizziness and the passage of tarry stools. For two years he had suffered from heartburn which was relieved by taking soda. At one period when his stools were black, it had been reported that his blood contained only 28 per cent of hemoglobin.

Physical examination revealed no abnormality. Roentgenologic examination of the stomach showed nothing of significance and his blood was found to contain 12.7 Gm. of hemoglobin. No roentgenologic examination of the small intestine was made.

About two weeks after returning home the patient experienced another gastro-intestinal hemorrhage and again passed tarry stools. Finally, after having two similar attacks, he returned to the Clinic on Nov. 4, 1943. As before, nothing unusual was found on physical examination or on roentgenologic examination of the stomach and colon. A roentgenologic examination of the small intestine was performed and the roentgenologist stated that in a short segment in the middle of the jejunum, measuring about 8 inches (20.3 cm.) in length, there were three separate and distinct tumors. The diameters of these tumors were approximately 1.5 cm., 2.5 cm., and 2.0 cm. They appeared to be located intramurally and probably were leiomyomas. Since examination was not continued beyond this point the roentgenologist recommended that at exploration the entire small intestine should be searched carefully for other lesions. A "spot" roentgenogram made at this time is shown in fig. 4*a*.

Operation was advised and on Nov. 12, 1943, a portion of the jejunum 29 cm. in length was resected. In this segment were found many leiomyomas, the largest of which measured 2.2 cm. in diameter and the smallest 0.3 cm. The pathologist stated that three of the leiomyomas were submucous and that there was ulceration of the overlying mucous membrane. The remainder of the leiomyomas were intramural or subserous. A photomicrograph of two of the tumors is shown in fig. 4*b*.

### *Meckel's diverticulum*

Dixon, Deuterman and Weber stated that approximately 25 per cent of the acquired diverticulums of the intestines are found in the small intestine. In 18 per cent of cases of diverticulum of the intestine the lesions are situated in the duodenum and these almost never produce symptoms. Those which are situated in the jejunum and ileum are rare and seldom produce symptoms.

Much more important to the roentgenologist and the clinician is Meckel's diverticulum which is present in about 2 per cent of all individuals. It is twice as common in males as in females.

Clinical manifestations. — The clinical manifestations of this type of diverticulum can be divided into six distinct groups, as follows:

Peptic.—Meckel's diverticulum is frequently the site of heterotopic tissue, most commonly gastric mucosa. As it does in the stomach and duodenum, the acid secretion of this tissue may produce a peptic ulcer. This ulcer may be situated in the diverticulum or in the ileum near the diverticulum. The most common symptom produced by this type of lesion is hemorrhage.

Obstructive.—Meckel's diverticulum may become inverted and push into the lumen of the ileum. When this happens, intussusception may take place and cause intestinal obstruction. Obstruction also may be brought about by congenital bands or acquired adhesions attached to the diverticulum or by perforation of the diverticulum.

Inflammatory.—When inflammation occurs in a Meckel's diverticulum, the symptoms are like those commonly associated with a similar lesion of the vermiform appendix.

Umbilical.—A cutaneous umbilical fistula may be present. Patients who have this type of lesion are seldom referred for roentgenologic examination of the small intestine.

Neoplastic.—Meckel's diverticulum may be the site of a benign or malignant neoplasm. Many pathologic types have been described. In cases of this sort the lesion may exist without symptoms; or bleeding, pain, mass or obstruction may occur.

Incidental. — Most Meckel's diverticulums show no evidence of a pathologic process and consequently produce no symptoms. They may be discovered as an inci-

dental finding at operation or at roentgenologic examination.

Clinic series.—During the period from Jan. 1, 1942, to Dec. 31, 1945 inclusive, 17 patients were operated on at the Mayo Clinic because of a pathologic process associated with Meckel's diverticulum. There were 11 males and 6 females. Fourteen of these 17 patients gave a history of hemorrhage from the bowel, with the passage of tarry stools, plum-colored or bright red blood. Four of these 14 patients also had experienced pain in the abdomen. One patient, in addition to these 14, had suffered from severe anemia for 12 years but gave no history of passing blood in the stool. In all but one of these 15 cases, the pathologist found gastric mucosa to be present in the diverticulum. In the one exception intussusception had been demonstrated roentgenologically and this process probably accounted for the bleeding.

Two of the 17 patients gave no history or had no symptoms referable to loss of blood. One of these patients, who suffered from attacks of partial intestinal obstruction, was found at the time of operation to have adhesions around the diverticulum. These had produced obstruction of the ileum. The other patient had experienced attacks of pain in the abdomen. He was found to have an inflamed and perforated diverticulum. Gastric mucosa was present in the diverticulum removed from this patient.

An adequate roentgenologic examination of that portion of the small intestine bearing the diverticulum was obtained in 11 of the 17 cases of Meckel's diverticulum. The diverticulum was overlooked in 5 instances and a lesion was found in 6. In one case the diagnosis was that of obstruction. In one case a constricting lesion was seen and Meckel's diverticulum was one of the possibilities mentioned in the roentgenologist's report. In 4 instances the Meckel's diverticulum was identified.

Meckel's diverticulum is the lesion of the small intestine most likely to be overlooked by the roentgenologist. The anomaly is known to be present in about 2 per cent of all individuals, and yet Weber and Good were able to collect from their experience and from a review of the literature less than 50 cases in which the diverticular sac was identified by roentgenologic methods. The usefulness of the roentgenologic examination of the small intestine in a case of suspected Meckel's diverticulum rests, therefore, on the ability of the method to exclude other lesions which might produce the symptoms of which the patient complains rather than on its capacity for visualizing the diverticulum. Of course, when the diverticular sac is seen the diagnosis is obvious.

CASE 5. A girl, 16 years of age, registered at the Clinic on Oct. 5, 1942. In 1937 her appendix had been removed. Except for this she had never been seriously ill. In December, 1940, she experienced a sudden, massive painless hemorrhage of bright red blood from the bowel. She fainted and subsequently required two transfusions of blood. She experienced similar attacks in November, 1941, and in July, 1942. In December, 1941, an examination made elsewhere which included roentgenologic study of the entire gastro-intestinal tract disclosed nothing abnormal. Although nothing was found to account for the attacks, it was suggested that they might be due either to Meckel's diverticulum or to a polyp in the colon.

Physical examination at the Clinic revealed no abnormalities and there were no significant laboratory findings. During the roentgenoscopic examination after a barium enema the terminal portion of the ileum was seen to fill. In the ileum at a distance of about 3 feet (91.4 cm.) from the ileocecal valve an intraluminal mass was encountered. During the examination this suddenly disappeared and at the same site there appeared a diverticulum which measured about 4 cm. in length. This was thought to be a Meckel's diverticulum which had been inverted when first seen and which had been reduced by the manipulation incident to the examination. A "spot" roentgenogram made at the time is shown in fig. 5.

Operation was advised and on Oct. 14, 1942, a Meckel's diverticulum, 4 cm. in length and 1.5 cm. in diameter, was found and removed (fig. 6). It did not contain heterotopic tissue.

*Comment*

In our experience the lesions most frequently encountered in the small intestine during roentgenologic examination have been nonspecific regional enteritis, neoplasm, both benign and malignant, and



Figure 5. "Spot" roentgenogram of segment of ileum showing Meckel's diverticulum. (Case 5.)

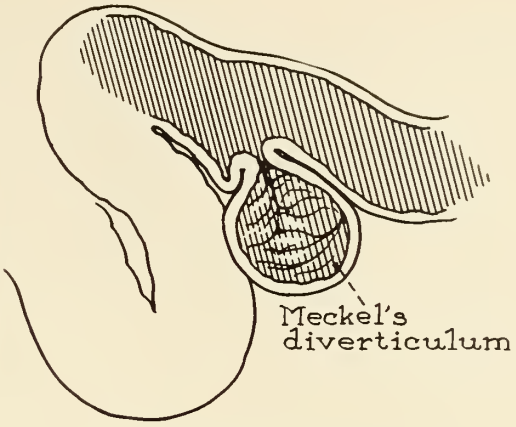



Figure 6. Segment of ileum showing Meckel's diverticulum. (Case 5.)

Meckel's diverticulum. These lesions caused four distinct types of clinical manifestations. The first type was a syndrome of loose or watery stools, cramping abdominal pain and loss of weight. This symptom complex was seldom caused, in the group of cases studied, by a lesion other than enteritis. The second type of clinical manifestations was characterized by various forms of gastro-intestinal bleeding. The loss of blood was indicated by the passage of tarry stools, the passage of bright red or plum-colored blood in the stools, the presence of occult blood in the feces or the presence of an anemia of the secondary or blood-loss type. The lesions in the group of cases studied which most frequently caused this type of clinical manifestation were the tumors and Meckel's diverticulum. Intestinal obstruction constituted the third type of clinical manifestation. This was encountered more frequently in cases of neoplasm, but it also was seen in cases of enteritis and Meckel's diverticulum. The final type of clinical manifestation was the presence of a mass in the abdomen. Such a mass was found in cases of neoplasm and in cases of enteritis.

Roentgenologic examination of the small intestine should not be undertaken until it has been proved that there is no lesion in the colon, stomach, or first portion of the duodenum which might account for the symptoms of the patient. This is especially true when the purpose of the examination is to search for a cause of bleeding from the gastro-intestinal tract.

No patient suffering from acute intestinal obstruction should be referred for roentgenologic examination of the small intestine. This type of patient either should undergo immediate surgical exploration of the abdomen or should receive treatment which is directed toward relieving the obstruction.

The diagnostic accuracy of the roentgenologic examination of the small intestine in the types of lesions discussed is highest in cases of regional enteritis, fairly high in cases of benign and malignant tumor, and lowest in cases of Meckel's diverticulum. Although the examination probably never will yield the high percentage of accurate diagnoses attained from the roentgenologic examinations of the stomach and colon, nevertheless, when properly done, the diagnostic yield is sufficiently large to warrant its use whenever a lesion of the small intestine is suspected.

TABLE 1

Clinical manifestations in 53 cases of nonspecific enteritis

| Clinical manifestations | Cases | |
|---|---|---|
| | Number | Per Cent |
| Loose or watery stools | 39 | 74 |
| Cramping abdominal pain | 36 | 68 |
| Loss of more than 10 lbs. in weight | 39 | 74 |
| Anemia or loss of blood in stool | 20 | 38 |

| | | |
|---|---|---|
| Palpable mass in abdomen | 15 | 28 |
| Fever | 9 | 17 |
| Partial or complete obstruction | 7 | 13 |
| Fecal fistula | 4 | 8 |

TABLE 2

Tumors of small intestine encountered from 1939 to 1945, exclusive

| Type of tumor | Cases 1939-1941, inclusive | 1942-1945 inclusive | Total |
|---|---|---|---|
| Adenocarcinoma | 16 | 10 | 26 |
| Carcinoma, carcinoid type | 3 | 1 | 4 |
| Miscellaneous malignant lesions | 2 | 1 | 3 |
| Lymphoblastoma | 1 | 5 | 6 |
| Adenoma | 1 | 1 | 2 |
| Leiomyoma (includes leiomyosarcoma) | 6 | 4 | 10 |
| Lipoma | 3 | 2 | 5 |
| Polyp, unclassified | 0 | 1 | 1 |
| Cyst, mesenteric | 2 | 1 | 3 |
| Extrinsic tumor, unclassified | 1 | 0 | 1 |
| Total | 35 | 26 | 61 |

TABLE 3

Clinical manifestations in 61 cases of tumors of the small intestine

| Clinical manifestation | Cases 1939-1941, inclusive | 1942-1945 inclusive | Total |
|---|---|---|---|
| Loss of blood* only | 10 | 11 | 21 |
| Loss of blood* and mass | 8 | 1 | 9 |
| Loss of blood,* mass and obstruction | 5 | 1 | 6 |
| Loss of blood* and obstruction | 3 | 4 | 7 |
| Mass alone | 3 | 1 | 4 |
| Mass and obstruction | 2 | 4 | 6 |
| Obstruction alone | 2 | 4 | 6 |
| No manifestations | 2 | 0 | 2 |
| Total | 35 | 26 | 61 |

*Includes also cases of secondary anemia in which other evidence of loss of blood was not found.


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## CITE FATAL CASE OF DDT POISONING

A case of fatal poisoning through accidental swallowing of a commercial DDT preparation is reported in the February 14 issue of *The Journal of the American Medical Association* by Nathan J. Smith, M.D., Department of Pathology, Veterans Administration Center, Wadsworth, Kansas.

The victim was a man of 58 who drank, accidentally, an insecticide which contained five per cent DDT. Within an hour he was suffering from severe gastrointestinal symptoms. They continued with increasing severity, and five days later he was admitted to the Veterans Administration Center in Wadsworth. Treatment proved futile and he died the next day.

At autopsy degenerative changes were found in the liver and kidney. When rabbits were experimentally poisoned with the same insecticide or given five per cent DDT in kerosene (another ingredient of the insecticide), the same effects were noted at autopsy.

"With the increasing use of DDT insecticides by the general public, it is not unlikely that occasional cases of poisoning from its accidental ingestion will be encountered," Dr. Smith warns.

# THE INCIDENCE OF BONE TUMORS IN A LARGE GENERAL HOSPITAL


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DAVID ROBINSON, M.D.,
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*Augusta*


"Bone tumors are as old as the Pyramids", as Christensen[2] in 1925 wrote in an excellent monograph reviewing 1000 bone tumors. He quoted Dr. G. Elliot Smith who reported finding several Egyptian mummies with well preserved bone tumors; in fact one of the mummies was the architect of the Pyramids. However, despite the antiquity of bone tumors, their occurrence is rare. It has been estimated that there are about 1000 cases extant in the United States.

We are presenting the results of our review of 16,363 roentgenologic examinations of bones which were made in our department from Jan. 1, 1942 to Dec. 31, 1946. These examinations included all ages and races and both sexes. The majority of the examinations were made routinely due to trauma. For the sake of simplicity and in order to condense this paper, we have tabulated our cases to include only those lesions that were found in our series, with the lesions classified according to the histogenic derivation along the lines of the modified classification of the Bone Tumor Registry of the American College of Surgeons in 1939. Ewing[3] wrote an excellent review of the latter classification. We are not attempting to offer a new classification of bone tumors, but are merely tabulating our cases according to the frequency in which they occurred in the radiographic examination of bones performed by our department.

The main object of this paper is to re-

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aquaint ourselves with the rarity of primary tumors of bone and the relative frequency of metastatic tumors to bone as seen in a general hospital admitting emergency cases and general type patients. We will also briefly attempt to re-emphasize the major roentgenographic differences between the benign and malignant lesions, showing a few examples by way of review.

We have divided our tabulation into four main groups (table 1). These are:

1. Primary benign tumors.
2. Primary malignant tumors.
3. Metastatic tumors to bone, and
4. Soft tissue tumors involving bone by direct extension.

Of the total number of bone examinations, we found 106 cases of bone tumors. This figure corresponds with the frequency of neoplasms of bone found by Goin and Carroll[4], who reported on the frequency of bone tumors in an orthopedic hospital limited to pediatric cases. Our incidence of all types of bone tumors was 0.63 per cent, theirs was approximately 0.5 per cent. However, our individual tumor results differed due to the obvious age differences with regards particularly to the metastatic lesions that occurred more frequently in our patients who were older. It is interesting to note that the total incidence of the tumors found was about the same.

Under group I, we included all types of primary benign bone tumors. In this group, we noted 35 cases of primary benign lesions. Statistically, we see that this group makes up approximately 33 per cent of the total incidence of tumors in our series. This is most encouraging in that the occurrence of primary bone tumors is rare, and the relative frequency of the benign lesions is greater than the primary malignant lesions. In this group we had twice as many males as females and more colored than white; however, this may be due to the relative frequency of trauma and traumatic examinations in these individual groups. The average age that we found for this entire group is around 26, which coincides with the general statistical average found by other workers for this type lesion.

The most frequent tumor seen in this group are the lesions which we have arbitrarily grouped under the *chondromas* including *exotoses* (osteochondroma, enchondroma, etc.) and *osteomas*. These lesions were all diagnosed roentgenologically and were usually an incidental finding. We found 16 cases in this group which made up about one half of the total cases in group I. The average age for the exostoses was 24, and for the osteomas was 41, due to the fact that the latter were found in the skull during a routine examination in older patients. Perlberg and Kruger[9] discussed the occurrence of osteoma of the skull and presented a very unusual case with this finding (see fig. 1).

The *solitary cysts* were next in frequency and included a total of 10 cases, 4 of which involved the jaw, 1 the skull and 5 the long bones. The average age for this group was 23. For simplicity, we have not subdivided our cysts of the jaw into individual components, as we feel that such a subdivision would only add to the monotony of a statistical study (see fig. 2).

*Giant cell tumors*, which some authorities have shown to occur in about 10 per cent of primary bone tumors, occurred in about 12 per cent of our our primary bone lesions. We had a total of 6 cases of this group. Meyerding in 1941[11] presented a paper on this type of tumor which is an excellent review. Our age group of 35 is well within the accepted average.

The remaining primary benign tumors that we found in our series include *hemangioma*, *cholesteatoma* and *xanthoma* and



Fig. 1. Osteochondroma of the humerus.



Fig. 2. Solitary cyst of the humerus with pathologic fracture.

are all rare lesions as evident by their infrequency in our series. Figure 3 illustrates our case of xanthomatosis which is a very rare lesion.

As mentioned previously, we based our diagnosis of tumors of group I on roentgenologic findings which are rather characteristic for each subtype in this group. Sutherland[12] points out the major roentgenographic characteristic of benign bone lesions as the retention of continuity of bone. We have shown a typical representative of the most common lesion in group I (see fig. 1); namely the osteochondroma or exostosis. This lesion shows that it follows the findings mentioned by Sutherland by retaining the continuity of bone. Even in these lesions which expand into soft tissue, the soft tissue is pushed aside rather than invaded. In passing, it must be mentioned that films should be of excellent technic showing both the soft tissue and bone detail; otherwise, a lesion that is malignant may be passed as benign due to the failure to inspect the changes which may first be evident in the soft tissues only.

In group II (table 3), we have included the primary malignant bone tumors. In this group we have a series of 9 cases, with the average age of 40. This type of lesion was more frequent in males with an equal racial distribution. This group made up 8.7 per cent of the total number of tumors found and makes up about one fifth of the primary bone tumors, occurring one out of 1800 examinations in our total series. These figures approximate those of Goin and Carroll[4] and other workers. This entire group was diagnosed by both roentgenographic and histologic studies.

Our cases of *multiple myeloma* numbered 4 which made up approximately one half of the total number of primary malignant bone tumors. The average age was 48. Meyerding[10] stated in his review of malignant tumors of bone that the average age for multiple myeloma was above 46. Our age average verifies his findings.

*Osteogenic sarcomas* were the next in frequency in this group. We had a total of 3 proven cases. Again, for the sake of simplicity we have not subdivided our classification. The incidence of osteogenic sarcomas that we have found compares with the generally accepted incidence. Goin and Carroll[4] reported one case in 4000 examinations of bones in a private hospital; our findings are approximately one case in 5000 examinations, which emphasizes the rarity of this type tumor. Nathanson and Welch[8] also emphasized this rarity in their article on the life expectancy and incidence of malignant disease.

We have had in our series only one case




Fig. 3. Xanthomatosis.

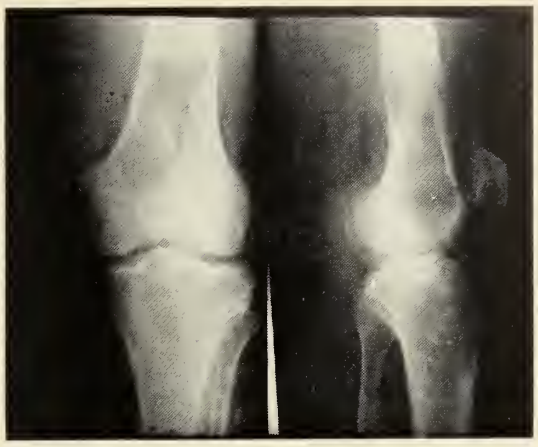


Fig. 4. Osteogenic sarcoma, distal end of femur.

of *Ewing's tumor* (endothelial myeloma). This occurred in a patient 58 years old and involved a rib primarily. The age of this particular patient was older than the generally accepted age incidence for Ewing's tumor which is essentially a lesion of youth. Gharpure[5] re-emphasized the rarity of this lesion and presented his findings in a case.

Another very rare primary malignant bone tumor which we found in our series is the *angioendothelioma*. Hauser[6] states that the diagnosis of this rarity is inferred by the x-ray examination but the final findings are the result of the microscopic diagnosis. This lesion may simulate multiple myeloma. Hauser showed that only one case was found in 12,000 autopsies. This coincides with our figure of one case in 16,000 examinations.

The roentgenologic diagnosis of primary malignancy of bone has been adequately described by numerous competent authorities. Brailsford[1] has written a number of excellent articles on the radiologic features of malignant bone tumors. Therefore, rather than elaborate on finer diagnostic points, we shall again generalize for the sake of simplicity, limiting ourselves to major differences between malignant and benign neoplasms of bone. Again, for the purpose of illustration (see figs. 4 and 5) we are presenting a representative of this group, namely, the osteogenic sarcoma. The major difference is that in malignant lesions, there is a dissolution of the contour shadow of bone. Meyerding[10] states that the involvement of bone with the invasion of soft tissue indicates a malignant neoplasm of bone. Of course, as pointed out by Brailsford[1] this is not entirely true in early lesions, and one has to be on the alert to rule out the possibility of early malignancy which may manifest itself by a slowly fusiform swelling of the limb or perhaps irregular wisps of calcium in the soft tissues near the cortex. But the later changes usually center upon the dissolution of the contour shadow of bone. Again, let it be emphasized that satisfactory films should be made before the evidence of bone tumor is ruled out.

Under group III (table 4), we have included all metastatic tumors to bone. The total number of cases in the group make up about 49 per cent of the total number of bone tumors, having an incidence almost as



Fig. 5. Osteogenic sarcoma involving the pelvis.

great as the remaining bone tumors combined. This stresses the importance of such lesions from a diagnostic, prognostic and therapeutic standpoint.

The age incidence of metastatic tumors to bone is older than that of the other previous age groups due to the older age incidence of cancer. In our series, our average age was 51. We had 19 males and 33 females, showing a greater frequency from metastasis from carcinoma of the breast than the prostate. The accepted order of frequency of metastatic bone lesions include the breast, prostate, thyroid and kidney. In our series, the first two primary sites were found according to the generally accepted frequency. However, it will be noted that hypernephroma is at the bottom of the list in frequency, and in the present series we have no evidence of metastasis from carcinoma of the thyroid.

Primary cancer of the breast is one of the most common tumors to metastasize to bone according to Joll[7] and other workers.

In this subdivision, we had 22 cases with the average age of 57. Usually, the spine, pelvis and ribs are the bones involved; however, the lesions may be widespread. In four of our cases the diagnosis was made

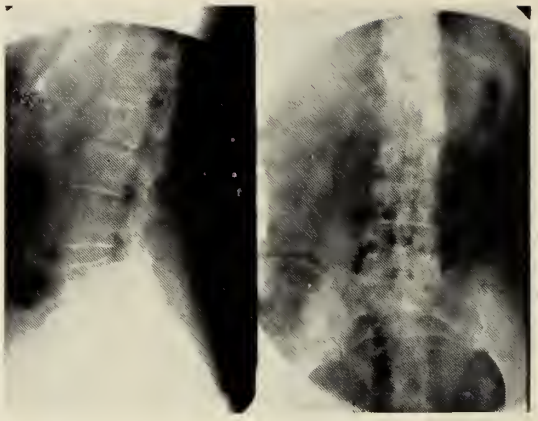


Fig. 6. Osteolytic type metastasis from carcinoma of the breast.

from the skull films alone. One must be on the alert to identify any lesion of any bone as a possible metastatic lesion. There are two types of metastases demonstrated roentgenographically; the usual type being osteolytic or bone destructive, the rarer type is osteoplastic or bone productive. The lesions appear primarily in the medullary cavity with later destruction of the cortex, but the periosteum is seldom involved. The osteolytic type lesion shows a moth-eaten appearance with some increase in density about the rarefied areas (see fig. 6).

Next in frequency are the metastatic lesions from cancer of the prostate. We had 15 cases in this subdivision, with an average age of 65. Metastases appear rather early in this disease. As in cancer of the breast there are two types of metastases evident on x-ray examination; however, the osteoplastic type predominates and is the usual lesion that we saw involving the pelvis and spine, the involved areas showing an increase in density of bone with areas of cystic mottling.

Under group IV (table 5), we have included those soft tissue tumors that have involved bone by direct extension. There were 8 such cases in our series, making up a total of 7.5 per cent of the bone tumors. The usual lesion found was secondary to carcinoma of the antrum, mandible or jaw,

and 60, the average age of this group, was older than that of any previous group.

One case in this group showed on x-ray examination a lesion that simulated the changes evident in an osteogenic sarcoma with destruction of bone and soft tissue expansion. By careful analysis and clinical study, a tentative diagnosis of synovioma was made preoperatively which was later confirmed by histologic study. The rarity of this type lesion is evident by the single case that we found in our entire series.

In passing, we wish to point out that inflammatory lesions often simulate malignant bone lesions and vice-versa. We have seen several cases in our series that were originally interpreted tentatively as malignancy, and which on final diagnosis proved to be an inflammatory process. Ungerman et al[13] reported an interesting similarity between a case of syphilitic osteitis and malignant lesions of bone.

TABLE 1

*Tabulation of Major Groups of Bone Tumors Found*

| | | |
|---|---|---|
| Total No. of examinations | | 16,363 |
| Total No. of bone tumors | | 106 |
| Incidence of bone tumors in our series | | 0.63% |
| Tabulation: | | |
| Group 1 | Primary benign bone tumors | 35 |
| Group 2 | Primary malignant bone tumors | 9 |
| Group 3 | Metastatic tumors to bone | 52 |
| Group 4 | Soft tissue tumors involving bone by direct extension | 8 |

TABLE 2 (33%)

*Tabulation of Tumors Found Under Group 1*

| | No. | Av.Age | M. | F. | W. | C. |
|---|---|---|---|---|---|---|
| Primary benign: | 35 | 26 | 23 | 12 | 14 | 21 |
| A. Chrondroma | | | | | | |
| (1) Exostosis | 11 | 24 | 7 | 4 | 3 | 8 |
| (2) Osteoma | 5 | 41 | 3 | 2 | 3 | 2 |
| B. Solitary Cysts | 10 | 23 | 8 | 2 | 5 | 5 |
| (1) Jaw | 4 | 37 | 2 | 2 | 2 | 2 |
| (2) Skull | 1 | 18 | 1 | — | 1 | — |
| (3) Long Bones | 5 | 14 | 5 | — | 2 | 3 |
| C. Giant Cell Tumor | 6 | 35 | 4 | 2 | 3 | 3 |
| D. Hemangioma | 1 | 28 | 1 | — | 1 | — |
| E. Cholesteatoma | 1 | — | — | 1 | — | 1 |
| F. Xanthoma | 1 | 11 | — | 1 | — | 1 |

TABLE 3 (8.7%)

*Tabulation of Tumors Found Under Group 2*

| | No. | Av.Age | M. | F. | W. | C. |
|---|---|---|---|---|---|---|
| Primary Malignant: | 9 | 40 | 7 | 2 | 2 | 6 |
| A. Multiple Myeloma | 4 | 48 | 3 | 1 | 2 | 2 |
| B. Osteogenic Sarcoma | 3 | 33 | 3 | — | 1 | 2 |
| C. Ewing Tumor | 1 | 58 | — | 1 | — | — |
| D. Angioendothelioma | 1 | 22 | 1 | — | — | 1 |

TABLE 4 (49%)

*Tabulation of Tumors Found Under Group 3.*

| | No. | Av.Age | M. | F. | W. | C. |
|---|---|---|---|---|---|---|
| Metastatic tumors: | 52 | 51 | 19 | 33 | 26 | 26 |
| A. Breast | 22 | 57 | — | 22 | 14 | 8 |
| B. Prostate | 15 | 65 | 15 | — | 5 | 10 |
| C. Bronchiogenic Ca. | 3 | 43 | 2 | 1 | 2 | 1 |
| D. Cervix uteri | 3 | 45 | — | 3 | 2 | 1 |
| E. Rectum | 2 | 43 | — | 2 | 2 | — |
| F. Kidney (hypernephroma) | 1 | 68 | — | 1 | 1 | — |
| G. Bladder (urinary) | 1 | 32 | 1 | — | — | 1 |
| H. Unknown | 5 | 55 | 1 | 4 | 3 | 2 |

TABLE 5 (7.5%)

*Tabulation of Tumors Found Under Group 4*

| | No. | Av.Age | M. | F. | W. | C. |
|---|---|---|---|---|---|---|
| Soft tissue tumors involving bone by direct extension: | 8 | 60 | 6 | 2 | 4 | 4 |
| A. Ca. of antrum | 3 | 71 | 3 | — | 3 | — |
| B. Ca. of mandible | 2 | 74 | 2 | — | 1 | 1 |
| C. Ca. of upper jaw | 1 | 53 | 1 | — | — | 1 |
| D. Ca. of nasal septum | 1 | 58 | — | 1 | — | 1 |
| E. Synovioma | 1 | 35 | — | 1 | — | 1 |

## *Conclusions*

We have shown by a statistical study of 16,363 roentgenologic examinations of bones that the occurrence of bone tumors of all types is relatively rare. We have also shown from a statistical standpoint that the metastatic lesions to bone are the most common lesions making up almost one-half of our group, that primary benign tumors are next in frequency, and that primary malignant tumors are very rare, making up only 8.7 per cent of the total tumors examined.

We have generalized on some of the essential diagnostic differences and presented several of the representative tumors from our series.

We have emphasized that excellent radiographic technic goes hand in hand with excellent radiographic interpretation and that examination of the soft tissues as well as bone is important in differentiating an early malignant lesion of bone.

## *Summary*

1. A statistical study is presented with reference to the frequency of bone tumors found during the routine x-ray examination of 16,363 bones.
2. The relative frequency of each lesion

is presented with age, sex and racial frequency.

3. Comparative figures by other workers is presented.
4. Some generalization as to the diagnostic difference between benign and malignant lesions is presented.

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# ROENTGENOGRAPHIC SURVEY OF THE GENITO-URINARY TRACT

JAMES J. CLARK, M.D.
*Atlanta*

The importance of urography has been recognized by the medical profession as of tremendous diagnostic value since the first reported examination by Tuffer in 1897. He suggested the simultaneous use of an opaque ureteral catheter and radiography. You will recall that Roentgen discovered x-ray in 1894.

Schmidt and Kolescher in 1901 suggested the same method and published roentgenograms, with a wire passed through the catheters and simultaneous radiography, and outlined the course of the ureter and the location of the renal pelvis for the first time. (These methods preceded the use of liquid opaque solutions for the purpose of outlining the ureter and pelvis.)

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Klase in 1904 attempted injection of bismuth solutions which were discarded due to difficulty in removing the particles of bismuth from the renal pelves, ureters and bladder. Volecker and Von Lichtenberg in 1906 first demonstrated successfully the complete outline of the ureter and renal pelvis, using colloidal silver. This report received little attention for several years. Various other solutions were suggested and used argyrol, silver salts or other types, air and gas. Pfahler in 1910 suggested emulsion of silver oxide. Many complications were encountered, and discussed in the literature such as over-distension and damage to the renal system and argyerosis. Various technics were used to avoid these.

In 1912, Fowler suggested examination in the erect position to determine the degree of renal excursion.

Remember in the early days, no Bucky diaphragms were available, and only gas tubes, and glass plates.

Braasch called attention to the value of urography as an aid in the diagnosis of hydronephrosis, pyelitis, renal tuberculosis, polycystic kidneys, and in identification of the renal shadows of tumor.

Early dangers were destruction of kidney substance from either silver or over distention. Efforts were made to find a safe pyelographic medium, as its dangers with silver were very real. In 1918, Cameron proposed the use of sodium or potassium iodide in 25 per cent solution. Weld suggested sodium bromide. After thorough investigation, sodium iodide was adopted in 1918, and a 15 per cent solution recommended.

The injection of perineal tissues with gas was suggested by Rosenstein in 1921.

Study of the renal pelves, ureters, bladder and urethra continued to receive more and more attention as x-ray technic and opaque mediums improved.

With consideration of this incomplete

historical review, and appreciating the tremendous amount of investigation and study that has been put forth by many investigators, and at the same time, realizing their many difficulties due to solutions, equipment, methods, etc., the progress made in fifty years is astounding.

What is necessary to obtain satisfactory and diagnostic roentgenograms of the genito-urinary tract?

What are the reasons for failure?

1. A lack of technical skill in cystoscopy and ureteral catheterization.
2. A lack of knowledge in the use of modern x-ray equipment.
3. A lack of care and understanding of the principles involved to obtain diagnostic studies and the reasons for careful and thorough preparation of the patient before this method of diagnosis is used.
4. A lack of interpretative ability to explain what is seen through the cystoscope or on the x-ray film after pyelographic study is attempted.

All four of these reasons for failure can be corrected. Practice and study will correct these errors, and make this great addition to our diagnostic methods of increasing value each succeeding year.

The value of a survey film of the genito-urinary tract is recognized. To be of greatest help in diagnosis, the patient should be thoroughly cleaned out, by cathartics and enemas. I realize that in an occasional case of acute illness, the patient cannot be cleaned out thoroughly.

A diagnostic roentgenogram should have three qualities:

1. Outline each kidney.
2. Outline each psoas muscle and the transverse processes of the vertebrae.
3. Include the body from the diaphragms to below the ischial tuberosities.

Patients show a variety of symptoms, often not referred to any special organ. This survey may demonstrate gallstones, pancreatic, renal, ureteral, bladder or prostatic calculi, anomalies, disease of the spine, liver, pelvis, and show unusual densities within the abdomen. The gas pattern of the intestinal tract should be studied, and foreign bodies looked for. After study of the survey film, cystoscopy with retrograde pyelography or intravenous pyelography may be decided upon.

Proper preparation of the patient for intravenous study requires attention to a few simple rules:

1. The patient should be as well cleaned out as possible.
2. No food or fluids should be ingested within four hours of the examination.
3. The preliminary survey film will show whether or not the patient is ready for the examination.

The patient should be questioned as to allergic problems such as asthma, etc. There are few contraindications. I have used this method in babies as young as three days, and in adults past ninety years of age. An occasional fatality has been reported in the literature; however, the danger is very slight, must below that of anesthesia.

If suspicious of a reaction, a drop may be injected intradermally, or dropped into the eye, and the patient's reaction noted for a few minutes. During injection, the patient may complain of flushing of the face and head. The solution should be at body temperature. Occasional urticaria of a transient type may be noted. At the end of injection, a balsa block is placed above the pubis and compression applied to partially obstruct the ureters, and help retain concentration in the renal pelves, calices and ureters.

A film is made in ten minutes, immediately developed. If not satisfactory, wait another ten minutes, and repeat. If the

pelves and calices are well outlined, the table is then elevated to 90 degrees, and the compressor band relaxed, and a final film is made to determine the mobility of each kidney.

Difficulties are encountered occasionally, and must be overcome. This is true in children who cry and swallow air which passes into the intestinal tract obscuring the renal areas. Frequently, we put a tube in the stomach, and also in the rectum to help get rid of this air, or we turn the child supine instead of prone, and this changes the position of the gastro-intestinal tract in relation to the renal tract, and permits more satisfactory results.

This method of urography is relatively simple, easy to do, and of great value in study of the patient. Interpretative knowledge of renal pathology and anomalies, of course, is required. The method is suitable for the office, which is important in this day of scarce hospital beds. The patients walk in and, after the examination, can go about their affairs in comfort.

In case questionable lesions are found, a retrograde study may be done at a later date if desired.

The quality of the diagnostic value of this roentgenogram is equal in the usual case to the retrograde study. Occasional failures are encountered in both methods.

The use of this method has advanced urographic science. We now detect anomalies of development, locate abnormal ureters and kidneys, obtain information as to function, and may detect non-opaque calculi, and recognize many pathologic conditions.

*Summary*

This paper has been presented to the society to emphasize the value of roentgenographic survey of the genito-urinary tract with or without pyelographic studies, not only as an aid in diagnosis of definite urologic disease, but also as an aid in diagnosis of the many indefinite abdominal complaints as presented by patients.

## DIVERTICULITIS OF THE SIGMOID WITH OBSTRUCTION

H. H. McGEE, M.D.
*Savannah*

The complications of diverticulitis may be listed as follows:

(1) Perforation
(2) Sinus and fistula
(3) Obstruction
(4) Complicating other diseases.

I am going to discuss briefly the subject of diverticulitis of the sigmoid with obstruction, and present five cases to illustrate some of the difficulties in differential diagnosis.

The colon is the most frequent site of diverticulum, and the sigmoid is most often affected. The diverticulums are produced by small protrusions of the mucosa and submucosa through a weak portion of the muscular coat, and usually occur near blood vessels.

In the absence of inflammatory changes the condition is known as diverticulosis.

According to Feldman[1] diverticulums of the colon for the purpose of classification may be divided into four stages. In the first stage a more or less localized area of the colon loses its normal haustration, presenting a saw toothed appearance, and often spastic narrowing of the lumen.

In the second stage small sacs may be observed, which may or may not retain the opaque medium.

In the third or inflammatory stage, the retained fecal material in the sacs has a tendency to cause an irritation followed by inflammation of varying degrees. The sacs, being devoid of a muscular coat, do not

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empty well. The neck of the sac may become compressed by the edema and infiltration in the bowel wall of the inflamed section, causing poor drainage from the sac, with resulting complications.

The fourth stage is the stage of complications.

Morton[2] reported 34 cases with obstruction, 8 of them had abscess also, and 3 had fistula and 1 had carcinoma. He also reported 39 cases of diverticulitis with perforation, 3 of which perforated into the free peritoneal cavity and developed extensive peritonitis. The other 36 cases had a large localized abscess.

Diverticulums occur chiefly in obese individuals past 40, and in my experience is more prevalent in females, in a ratio of 5 to 3. Constipation with increased pressure in the colon and inflammatory processes are considered to be predisposing or contributive causative factors.

The symptoms of diverticulitis are pain, tenderness, and muscular rigidity, usually over the sigmoid. In recurring attacks of pain in the lower left quadrant over a long period of time, the most frequent inflammatory process is diverticulitis of the sigmoid. There may be elevation of temperature and of the white blood count. A mass may be felt which is due to chronic hyperplastic thickening of the bowel wall. Bleeding is not a usual symptom but has been reported by various authors in from 3 to 25 per cent of cases. Where bleeding is found, polyp or carcinoma should be suspected.

There are two types of shadows characteristic of diverticulums. If the sac contains fecal material, a ring-like shadow is cast by the barium around the fecal matter. When no fecal material is present, a rounded or bud-like shadow is seen. Barium may be retained in the sacs for several days.

The diagnosis by roentgen-ray examination is based on the presence of diverticulums, spasm, tenderness and in some instances a palpable mass. The intestine close to a malignant lesion may be normal in appearance, while an inflammatory process in the wall usually manifests itself a longer distance from the center of involvement. Also in carcinoma the defect is constant; in diverticulitis the defect has a tendency to vary. Repeat examinations are useful in revealing the variable picture characteristic of diverticulitis. In diverticulitis with infiltration of the bowel wall there may be partial or complete obstruction, and the diagnosis from carcinoma is sometimes impossible. The surgeon cannot be sure even at operation, and the pathologist has to make a section to make a positive differentiation.

I have seen several cases which were completely obstructed to the barium enema, yet were having bowel movement, with the aid of mineral oil by mouth. This may be explained by the spasm associated with the administration of the enema.

I have had 24 cases of diverticulitis in my office in the past 15 months, 9 occurring in males and 15 in females. The 4 cases of obstruction all occurred in females, and 1 which perforated was in a male.

CASE 1. A 55 year old man of stout build, had a subacute perforation, with localized peritonitis, abcess formation and small bowel obstruction. Subsequent to operation he developed an external fistula between the anterior abdominal wall and the sigmoid.

CASE 2. This was a 67 year old woman, weighing 152 pounds and 5 feet 1 inch in height. On examination of the colon by barium enema there was a partial obstruction in the sigmoid, with irregular narrowing of the lumen and several small diverticulums. There was tenderness and a palpable mass. At operation there were found omental adhesions to a sigmoid mass, which proved to be a large abscess in the cul de sac secondary to perforation of a diverticulum. About 300 c.c. of thick greenish yellow pus were aspirated.

CASE 3. A moderately obese lady of 82 had a partial obstruction in the sigmoid by barium enema examination. The lumen was narrowed and irregular, with multiple diverticulums, also spasm and tenderness. At operation a carcinoma of the sigmoid was found, with involvement of the omentum.

CASE 4. A 62 year old obese woman had a roentgen ray diagnosis of complete obstruction in the lower sigmoid. At operation the sigmoid was obstructed by a gallstone 1½ by 1 inch in size. The stone was impacted in a localized area of fibrosis, and 5 small diverticulums were found in this area.

CASE 5. An obese woman, aged 66, had a roentgen-ray daignosis of partial obstruction in the sigmoid due to diverticulitis. This patient was examined on four

occasions before operation. At operation the sigmoid was inflamed, edematous and adherent to the left pelvic wall. The sigmoid could not be delivered into the wound, so a colostomy was done.

*Comment*

Five cases are reported, which are considered representative of the usual run of complications encountered in diverticulitis.

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# SKIODAN ACACIA IN HYSTEROSALPINGOGRAPHY

MAX MASS, M.D.
*Macon*

Roentgen diagnostic procedures on the female internal genitalia has now become a relatively safe and valuable method for aiding the gynecologist and general surgeon in problems regarding sterility and pelvic pathology. As radiologists, we take justifiable pride in our clinical evaluation of a medical problem. We see the patient and examine him. We carry out special procedures such as pneumoencephalography, bronchography, arteriography, etc. I, for one, see no need for delegating hystersalpingography to the average general surgeon or even gynecologist unless a cooperative team is set up in which the radiologist plays a prominent part. Like all other roentgen diagnostic procedures, a first hand clinical study of the patient is desirable if a proper evaluation of the hysterogram is to be made.

In the past we have been somewhat appalled by a high morbidity and occasional fatality resulting from the use of air in tubal insufflation. Today, the experienced gynecologist carries out the Rubin test using carbon dioxide with no fear of embolization.

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Rubin first used collargol as an opaque medium to visualize the internal genital tract in 1914. This proved too irritating to the peritoneum. In 1925 Fosdike used lipiodol but objections soon became manifest. Sometimes acute peritonitis and pulmonary embolism developed. Diodrast, skiodan and uroselectan proved to be of insufficient viscosity.

Titus and his collaborators amply demonstrated that skiodan will not liberate free iodine and will produce no untoward effects even when administered intravenously in high concentration. The low viscosity objection was overcome by combining a 40 per cent skiodan solution with 20 per cent acacia. This combination allowed sharp radiographic contrast when films are made within 10 minutes after instillation. After 20 minutes there is usually no trace of opaque material. It is clear therefore that this procedure is not designed to carry out the purpose of a tubal insufflation test but rather to visualize the internal genitalia. Congenital abnormalities of uterus and tubes, delineation of pelvic masses, pathologic alterations, postoperative deformities, tubal patency, and intrauterine pathology can often be clearly demonstrated.

The method I employ is designed for the radiologist as a diagnostic procedure. I make no attempt to force tubal patency under controlled manometric pressure. The only equipment necessary for this test is an olive tip cervical cannula with luer lock adapter, luer lock syringe, and tenaculum cervical forceps.

The patient is admitted for the examination about a week after cessation of menses. I administer 1 grain codeine one-half hour prior to the procedure. The patient is placed on a radiographic table in the lithotomy position. A bimanual examination is done. The vagina and cervix is cleansed with an antiseptic. The cervical canal is aspirated and the tenaculum is applied above and

behind the external os. The cannula is inserted and then fixed to the forceps by means of a small clamp. A preliminary film of the pelvis is made, then the technician stands at the controls ready to expose the first film after the instillation of the skiodan acacia solution. As soon as 2 c.c. have been injected, another exposure is made and so on in rapid succession until about 5 films have been obtained during the instillation of about 10 c.c. If the patient complains of pain the procedure is interrupted and a wet plate reading is available in a few minutes to determine whether it is feasible to consider the study terminated.

In 140 cases studied, 60 per cent showed varying degrees of discomfort after the study. The greatest majority cleared up within an hour. A small number had pain up to 3 hours. Eight patients had severe discomfort for as long as 12 hours and 2 patients had mild symptoms of shock. About 40 per cent of all patients had no appreciable symptoms. All patients returned home on the same afternoon the examination was performed.

*Summary*

1. Skiodan acacia is a safe medium for hysterosalpingography.
2. The radiologist should consider this procedure within his province.
3. No rigid precautions are required.
4. The equipment and technic are simple.

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## ACTION NEEDED TO PREVENT EPIDEMIC OF HUMAN PLAGUE IN U. S.

If proper preventive action is not taken immediately, the United States may find itself in the middle of an epidemic of human plague, according to an editorial in the February 14 issue of *The Journal of the American Medical Association.*

The editorial follows:

"Human plague appeared for the first time in the United States in the Chinese quarter of San Francisco March 6, 1900. Between that date and January 1, 1940, eight states reported cases of human plaque—Washington, Oregon, California, Utah, Nevada, Texas, Louisiana and Florida. During 1946 infection had been found in ground squirrels and other rodents as far east as the Mississippi Valley. The United States Public Health Service has conducted campaigns for the eradication of infected rodents since 1908. The budget for such eradication dropped from $200,000 in 1912 to $51,000 by 1915. This campaign, coupled with efforts by the individual states, still continues but has languished considerably.

"R. H. Creel, M.D., estimated in 1941 that a well organized and well sustained campaign financed by approximately $2,500,000 would virtually eliminate rodent plague in the United States. To date the needed funds have not been forthcoming. This condition is a definite threat of human plague in epidemic proportions in the United States. The main conditions necessary for epidemics of human plague are infected rodents, the flea transmitter and susceptible persons in close proximity. Overcrowded housing conditions in many large cities tend toward the establishment of the conditions necessary to epidemic outbreak. Proper preventive action is needed immediately."

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# METASTATIC CANCER OF THE LUNG

Robert C. Pendergrass, M.D.
*Americus*

Early recognition of metastatic cancer of the lung is vitally important in the management of malignant disease. This apparently trite statement needs repetition and emphasis because we are still seeing patients with malignant disease subjected to radical surgery or to equally radical radiation therapy in the presence of extensive metastatic involvement of the lungs. This is not only happening in rural areas but it is happening in our larger cities at the hands of individuals trained in the treatment of cancer. One must be eternally vigilant if he is to suspect and to rule out metastatic cancer of the lung. Routine examination of the chest in the follow-up of cases treated by operation or radiation therapy is essential.

The recognition of metastatic cancer of the lung is not always easy. In general there are four types of involvement. (1) Large nodular masses, (2) Small miliary lesions, (3) Linear, infiltrating strands and (4) Pleural involvement, manifested by either pleural thickening or fluid. The above statements apply to the parenchyma of the lung and to the pleural, but there may also be enlargement of the mediastinal lymphatics.

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On reviewing the above groups of infiltrations, one is instantly aware that many other diseases may produce shadows on the x-ray film which assume similar patterns to those mentioned above, and that a thorough knowledge of all the clinical aspects of the case, together with the laboratory findings, may be necessary to differentiate metastatic cancer of the lung from other lesions.

Large, nodular masses may be confused with adenomatosis of the lung. Freedman and Bosse[7] have cited an interesting case of carcinoma of the lung with metastases, in which the nodular lesions simulated metastatic disease alone. Eugene Pendergrass and Neuhauser[2] have called attention to the rounded shadows occasionally seen in hemophiliacs and to the fact that encysted interlobar effusion may simulate solid nodular lesions in the lung itself. The large, rounded masses produced in the lung by metastatic hypernephroma and by testicular tumors are familiar to all of us. One must remember that there may be multiple cysts of the lung which are filled with fluid, casting dense shadows which may be confused with metastases.

The small, miliary metastatic lesions may be confused with miliary tuberculosis or with various fungus infestations. Aspergillosis of the lung produces small, soft, rounded miliary shadows which may be easily mistaken for metastases. Dense shadows are also seen in certain stages of coccidiodomycosis of the lung and in the rarer geotrichum infections. It is to be remembered that the lesions of coccidioidomycosis may persist for months and even years after the acute pulmonary onset.

The linear type of metastases, often beginning at the root of the lung and stretching out to its periphery, may be confused with a variety of diseases. One must not forget that the signs of passive congestion of the lung may simulate a type of pulmonary metastases. The lymphomas may invade the lung in such a way as to simulate secondary metastatic lesions. Perhaps the most confusing lesion is that of radiation fibrosis. This picture is often encountered in follow-up examination where patients have had therapy over the chest because of breast cancer or for the treatment of mediastinal tumors. It is often very difficult to differentiate metastatic lesions from radiation fibrosis and in an article reviewing the subject of pulmonary metastases and pneumonitis following radiation therapy for cancer of the breast, Pendergrass and White[4] were forced to discard eleven cases from their series because they could not determine from the radiographs alone which condition was present. They believe that the answer lies chiefly in serial films. In addition to the fact that elevation of the diaphragm and shift of the heart, together with narrowing of the ribs, is usually seen in radiation fibrosis, they call attention to the fact that they have noted the presence of pleural blebs in five cases of radiation fibrosis.

Pleural involvement with or without effusion presents a common type of metastatic cancer of the lung. Some feel that there is no such thing as pleural involvement alone but that autopsy will always show some involvement of the pulmonary parenchyma. In this connection we are reminded that the thickened pleura or the fluid may hide parenchymal lesions and that films after aspiration of fluid may reveal them.

In children, cystic fiibrosis of the pancreas produces pulmonary lesions which might readily be confused with metastases from tumor elsewhere. The Meigs' syndrome with pleural effusion and ascites in association with fibroma of the ovary must be kept in mind. Fullenlove[5] reported a case of sacculated aortic aneurysm, with small daughter aneurysms on its borders which was mistaken for mediastinal tumor with metastases. Boeck's sarcoid, with its

involvement of the hilar nodes and its infiltrations into the parenchymal lung field, may also be confused with metastases.

One must be constantly on guard against assuming that any abnormal shadow appearing on radiographs of the chest, in the presence of malignancy elsewhere, is necessarily due to metastasis from the original tumor. One such case in which identification of pulmonary shadows became extremely important in the management of the case will be shown in the case reports.

Granting that the presence of metastatic cancer of the lung is recognized, what are the practical applications?

1. The prevention of futile major operative procedures is the most important reason for recognizing metastases in the lung.

No patient should be subjected to radical surgery such as the amputation of a leg or a breast or to extensive pelvic surgery, or to the removal of a kidney, until the chest has been examined. This admonition applies, of course, to a study of the skeletal system.

2. Once the original lesion has been treated and the patient returns for follow-up examination, the recognition of metastases may mean a great deal in the management of the case and in the prognosis. Remember that cancer carries with it a heavy economic burden, a rearrangement of family affairs must often be made to meet this burden, and there often arises the decision as to whether the patient will be placed in an institution for future care. As physicians and as men, we owe it to the patient and his family to be well informed of the progress of his disease.

A word as to treatment. There are instances in the literature where metastases to the lungs have been treated by radiation and sterilization and by the use of hormones. Unfortunately, in the majority of cases the results are poor. Some feel that heavy radiation over the lungs will rapidly produce an anemia in the patient and that such treatment should be omitted. Every case rests upon its own circumstances and judgment is often difficult. We do not routinely treat pulmonary metastases. We have recently treated five cases with fairly large doses of oreton daily but have seen no effect upon the pulmonary metastases from cancer of the breast or cervix.

In closing, I would like to call your attention to the fact that carcinoma of the cervix does metastasize to the lungs. The incidence of such metastases is small. Reports from several of the larger clinics reveal that the lesion is seen only occasionally. One radiologist who has a large amount of material available reports that he has seen about ten cases, another reports that he has seen five or six, and another that he has not observed any. These reports came from widely scattered sources. We have observed three instances of this type of metastases in the last seven years but have not made routine examination of the chest of cervix patients in our follow-up examinations. It is planned to carry out such a study so that a better idea may be obtained of the frequency with which this lesion does spread to the lungs. Willis[10] states that carcinoma of the uterus metastazises in about 15 per cent, but his figures include both the body of the uterus and the cervix and are based on autopsy statistics. One hundred and fifty cases of carcinoma of the cervix, studied at the University of Virginia Hospital, revealed no instances of pulmonary metastases at the original examination.

*Summary*

1. Mention is called to the various roentgenologic patterns which metastatic carcinoma of the lung may assume.

2. Differential diagnosis from other lesions is discussed.

3. The importance of the recognition of metastases before carrying out major sur-

gical or radiologic procedures is emphasized, as is the importance of examination of the chest in follow-up studied of cancer patients.

4. Mention is made of the fact that carcinoma of the cervix occasionally metastasizes to the lung.


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## DISCUSSION OF PAPERS BY DRS. GOOD; HOLMES, BROWN AND ROBINSON; CLARK McGEE; MASS; AND PENDERGRASS,

DR. ROBERT DRANE (Savannah): I should like to emphasize what Dr. Good said about the difficulty of examination of the small intestine. If a center which champions flouroscopy makes a mistake in 18 per cent in these cases, what can you expect from examinations in our practice, where we are constantly interrupted? We cannot satisfactorily make these examinations. I think those cases which bleed, where we cannot find the sources of bleeding in the duodenum or stomach or colon, can better be served there.

DR. ALBERT RAYLE (Atlanta): The problem of neoplasm of the small intestine I think is a nightmare to a lot of us. I sometimes see a patient in whom I find a coil of jejunum and a lot of barium up there, way behind schedule. It seems to me the best thing the roentgenologist can do is to call attention to that and throw the whole thing back into the hands of the clinicians. I should like to know if Dr. Good would suggest going into it further. I should also like to know in what percentage of total gastro-intestinal examinations you do find tumors of the small intestine.

DR. WM. F. JENKINS (Columbus): I should like to ask Dr. Good what is the time interval of the fluoroscopic studies after giving the meal by mouth in the small-intestine study and just how much radiography he does with it. Does he take a plate every time he fluoroscopes or make spot films? I should also like to know whether he considers radiographs at hourly intervals after the ingestion of the meal of any value in comparison with the combined fluoroscopy and radiography. I should also like to ask him, in a case in which he does not find a cause for the bleeding after doing the stomach, the colon and the small intestine, when he feels that his examination is completed. One of his co-workers, Dr. Weber, once stated that you have not finished an examination of the gastro-intestinal tract, when there is bleeding, until you have demonstrated the cause of the bleeding. Now, when do you consider that you are justified in stopping?

DR. C. ALLEN GOOD (Closing): At the clinic we limit appointments for roentgenologic examination of the small intestine to three a day. This figure represents about 3 per cent of the roentgenologic examinations of the gastro-intestinal tract done each day. As a matter of fact, I doubt that we find anything wrong in half of the patients whose small intestines we examine.

I should like to stress the point that pain alone is not a sufficient indication for roentgenologic examination of the small intestine. The most important indication for the examination is bleeding; next most important is obstruction. If an abdominal mass is present, the examination probably is indicated, although in many instances surgical exploration will be carried out in any event. As yet, I have never explained abdominal pain by roentgenologic examination of the small intestine unless that pain was accompanied by some measure of obstruction.

The 61 tumors of the small intestine presented in this discussion represent those found surgically in an interval of seven years. During this same period we examined the small intestines of 5,520 patients. Obviously, then, this type of lesion is rare.

I have been asked to comment on the roentgenoscopic method of examination which we employ. As a routine procedure we give our patients about 250 c.c. of a mixture of barium and water to drink. The stomach is examined and as much as possible of the opaque mixture is expressed from the stomach by manipulation during the first period of observation. The patient returns at intervals of a half hour until the cecum is visualized. An attempt is made, during these periods of observation, to examine every inch of the small intestine. Roentgenograms are made for the record after each observation, although this procedure seldom results in the finding of a lesion not already seen at the time of roentgenoscopy.

The time which it takes the opaque material to reach the cecum—that is, the transit time—can vary from thirty minutes to six hours without exciting our curiosity. We find a considerable variation in normal transit time among patients, and such a variation may be present in the same patient at subsequent examinations. Transit time is to be distinguished from motility, which is a function of the various muscular actions of the wall of the bowel. The motility can be increased in a case in which the transit time is prolonged.

Many of the tumors included in our series would not have been found had we depended on roentgenograms alone. I cannot stress too strongly the necessity for a careful roentgenoscopic examination. Even with the most painstaking observation, some lesions will be missed, for there are some persons in whom loops of ileum are so placed within the bony confines of the pelvis that proper manipulation is impossible.

A question was asked about repeated roentgenologic examination of the patient who has bled from the intestinal tract and in whom nothing was found at the first attempt at examination. I feel that it is important to eliminate the esophagus, stomach, duodenum and colon as the source of bleeding before roentgenologic examination of the small intestine is repeated. Repeated roentgenologic examination of these organs, gastroscopy and proctoscopy should be advised. Then, if nothing is found to explain the bleeding, another roentgenologic examination of the small intestine may be indicated. Sometimes surgical exploration will be necessary to find the bleeding point, and occasionally there will be a case in which even exploration will not explain the loss of blood.

# PRESIDENT'S PAGE

## MEDICAL CARE PROBLEMS OF GEORGIA

At its annual meeting in Atlanta, beginning April 27, the Medical Association of Georgia will celebrate its 99th birthday.

Our forbears and founders builded well. Since 1804 organized medicine in Georgia has been striving to improve the scientific knowledge of its members, to prevent disease, to lower morbidity and mortality, and to give to the people of this State not only longer lives but happier ones.

The proof of how well we have succeeded in a part of this effort may be found in the vital statistics of the Georgia Department of Public Health. These will show that Georgia medicine is controlling infectious and contagious diseases, diabetes, the anemias, nutritional deficiencies and is correcting the abnormalities of human beings. Man's life expectancy is today almost 67 years compared to 35 years in 1790. Now we are chiefly concerned with the diseases of the aged, such as hypertension, cancer and heart disease. We are proud of our part in giving to this nation the highest level of health and the lowest death rate ever known for any people in any country.

Yet, the medical problems of the people of Georgia are far from being solved. In 1850 the problems of organized medicine in Georgia were scientific and medical; today they are economic and social, such as

1. Medical care of the indigent.
2. Medical care in rural areas, caused by the unequal distribution of Doctors of Medicine.
3. Shortage of nurses.
4. High cost of medical care in prolonged illness.
5. High divorce rate.
6. Ever-increasing number of neurotics and neuropaths.

Many State officials, the press and most organized lay groups are concerned over these problems. Yet, they are looking to organized medicine to take the lead in offering the solutions. I believe that most of us will agree that such a responsibility is ours.

Therefore, in keeping with this idea, your President and other officials suggested to the Governor that he call a state-wide conference on The Medical Care Problems of Georgia. From this conference we hope to have a 50-member fact-finding commission to study these problems during the remainder of this year, and then correlate their findings and make recommendations to the people of Georgia and the next General Assembly for the best possible remedies. This movement is strictly non-partisan. It is bigger and of more importance than any individual or group of individuals in Georgia.

Such a conference was called March 19 and 20 at the Academy of Medicine in Atlanta. There many of the best citizens of the State, leaders in their particular business or profession, assembled and unselfishly studied the medical needs of Georgia.

I believe that great good will come from this meeting. I urge that the Commission have the fullest support and cooperation of every member of the Medical Association of Georgia. And I also want to take this means of expressing the appreciation of the Medical Association of Georgia to these lay leaders who have given of their time, thought, work and money to help us solve the medical care needs of our State.

Steve P. Kenyon, M.D.

**THE JOURNAL**
OF THE
MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

MARCH, 1948

## ATLANTA SESSION, 1948

The Ninety-Eighth Annual Session of the Medical Association of Georgia will be held in Atlanta, April 27-30. The programs for both the Association and its Woman's Auxiliary are published in this number of THE JOURNAL. Also, as has been customary for many years, the Constitution and By-Laws of the Association is published.

Delegates to this session are reminded that the first meeting of the House of Delegates will be held at the Academy of Medicine, Atlanta, at 2 o'clock in the afternoon of April 27. Any proposal to be made should be typewritten, double-spaced, with two copies, and state whether or not the proposal was endorsed by the county medical of which the delegate is a member.

Council will meet in the Academy of Medicine immediately following the session of the House of Delegates.

The scientific session of the Association will begin April 28. One should read carefully the program to ascertain where the session will be held, since some sessions will be at the Biltmore Hotel and others at the Academy of Medicine.

All exhibits will be housed in the Academy of Medicine.

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## CHEMOSURGERY MOST RELIABLE TREATMENT FOR FACIAL CANCER

Chemosurgery, the new technique which combines chemistry and surgery, has proved itself by far the most reliable method for treatment of cancer of the face. This claim is substantiated by Frederic E. Mohs, M.D., of Madison, Wis., in the current issue of *Archives of Dermatology and Syphilology*, published by the American Medical Association.

The writer, who coined the term "chemosurgery" for the technique in which he pioneered, is associated with the Department of Surgery of the Wisconsin General Hospital and the McArdle Memorial Laboratory for Cancer Research of the University of Wisconsin School of Medicine. His conclusion is based on several hundred cases of cancer of the face, of different types, which were successfully treated by the chemosurgical method. Before treatment many of the cancers had been in an advanced stage, and many had recurred after previous treatment by means of surgical excision, irradiation or caustics.

The chemosurgical method is applicable only to readily accessible cancers, such as those of the face, mouth, nose, cheek or ear. Its most important feature, according to Dr. Mohs, is that the cancerous area to be removed can be exactly determined by microscopic examination of the tissue. Only one or two millimeters of tissue beyond the limits of cancerous invasion need to be removed.

In the case which he uses to illustrate the chemosurgical process, chemical fixatives—used by pathologists to preserve dead tissues as nearly in their lifelike form as possible—were applied to the outer part of the growth. This rendered the cancerous cells temporarily powerless to spread. Then came dressings that made a moisture-tight closure. On the next day, one layer of the growth was removed—painlessly, since the tissue was not living tissue. White, flaky tissue that was obviously cancerous was still visible, so fixative was then reapplied.

A second layer of "fixed" tissue was removed on the second day. This time no cancerous tissue could be readily detected, and so the layer which had been removed was divided into sections and examined under the microscope in order to find out whether enough tissue had been taken off. Further application of the fixative was limited to cancerous areas indicated by the microscopic examination. The process went on until an entirely cancer-free layer of tissue was reached.

Fixative was then applied for the last time. Some days later the final layer of fixed tissue became loose and separated from the living tissue, so that it was simple to remove it with scissors.

There is practically no mortality due to the operation, Dr. Mohs says, and the proportion of successes cannot be duplicated by any other method of treatment. He cites 232 cases of basal cell epithelioma of the face, a common form of cancer which affects the cells covering the skin and mucous membranes but usually remains a local growth, which were chemosurgically treated. Dr. Mohs was able to follow 174 cases for at least three years afterwards and none showed evidence of cancer. He was able to follow 94 of the 174 for five years or more, and

all of these were still cancer-free.

In another type of cancer, squamous (scaly) cell epithelioma, it more often happens that cells will break off from the original mass of cancerous tissue and be carried to other areas, setting up a secondary cancerous growth. One hundred and three squamous cell epitheliomas of the face were chemosurgically treated, and Dr. Mohs was able to follow 70 of these for three years or more. He says that the original facial cancers were successfully eradicated in 68 of the 70 cases, but all of the nine cases with secondary growths had to be reported as failures. This still made the percentage of successes 84.3 per cent. He was able to follow 28 of the 70 for five years or more, and 82.1 per cent of these remained entirely cancer-free.

## BRUCELLOSIS BEST TREATED BY SULFADIAZINE AND STREPTOMYCIN

*Intensive Hospital Investigation Shows Combination Most Likely to Destroy Brucella Organism in Humans*

Investigations carried out over a 10-year period in the laboratories and clinics of the University of Minnesota Hospitals indicate that combined treatment with streptomycin and sulfadiazine is more effective against human brucellosis (undulant fever) than any other known therapy, four physicians announce.

The Brucella organism is transmitted to humans by contact with diseased dogs, goats or cows, or by drinking the milk of infected animals.

Writing in the February 7 issue of *The Journal of the American Medical Association*, the four doctors report the cases of more than 30 patients with active brucellosis whom they studied and observed, and whose treatment they directed. The writers are Wesley W. Spink, M.D., Wendell H. Hall, M.D., James M. Shaffer, M.D., and Abraham I. Braude, M.D., from the Division of Internal Medicine, University of Minnesota Hospitals and Medical School, Minneapolis.

The December 20, 1947 issue of *The Journal of the American Medical Association* carried a report on the successful treatment of a single case of undulant fever by combined streptomycin and sulfadiazine therapy. The scope of the present writers' investigations enables them to draw more definite conclusions, however.

In the hospital laboratories, they report, the anti-brucella properties of the sulfonamide compounds and the antibiotics were tested on chick embryos which had been inoculated with a culture of Brucella. Used separately, sodium sulfadiazine and streptomycin both prolonged life, but in a majority of cases failed to destroy Brucella organisms. Only the two in combination achieved that.

Both before and after these chick embryo experiments had yielded results, human patients with bacteriologically-proved brucellosis were being treated and studied in the University of Minnesota Hospitals. Many had been ill for several months, and severe complications were present. From the types of treatment tried, the doctors report the results which might have been expected from the chick embryo experiments: in both acute and chronic brucellosis cases, a sulfadiazine-streptomycin combination brought the most satisfactory results. Furthermore, other patients whose symptoms pointed to brucellosis as the most probable diagnosis also responded well to the combined therapy, although the presence of Brucella organisms in their tissue or body fluids had not been proved.

Exceeded in importance by only three other communicable diseases — tuberculosis, syphilis and gonorrhea—undulant fever has baffled medical men for many years. The forms which the disease takes are extremely variable, and even after apparent recovery the Brucella organism may remain in the patient's tissues. Relapse and recurrence of symptoms have therefore been common.

"The fundamental requisite of successful therapy for human brucellosis is that treatment should not only control the infection but that Brucella should be eradicated from the tissues," the doctors write. "This therapeutic principle has been the basis for seeking out a more satisfactory form of specific therapy in this clinic."

Sulfonamide therapy obviously did not eradicate Brucella from the tissues in well over one third of the 20 patients who were treated with one of the sulfonamide compounds alone. "Furthermore, recovery in some of the remaining patients might well have been independent of sulfonamide therapy and more directly associated with bed rest."

Streptomycin therapy, administered to seven patients, did not result in a single complete recovery, and in three instances had to be discontinued because of toxic reactions. One patient died from complications, even though Brucella had been eradicated from his tissues and blood. As a result of this, and as a result of the investigations which by this time were under way with the chick embryo technic, it was decided to abandon the use of streptomycin alone in favor of combined treatment with streptomycin and sulfadiazine.

Nine patients—six with acute brucellosis, three with the chronic form of the disease—were finally treated simultaneously with sulfadiazine and streptomycin. As a result, all but one gave every indication of recovery. The treatment also was effective in cases with serious complications of brucellosis. One of the apparently cured patients relapsed after treatment was discontinued, but a more prolonged course of treatment resulted in his actual recovery. In the remaining

case the course of therapy was interrupted by complications; after an intensive program of chemotherapy he too improved slowly. Even in his case there was no recurrence of brucellosis.

"It remains to be seen whether the combined therapy will be satisfactory in so-called chronic brucellosis, that is, in patients having a vague type of illness," the doctors conclude.

"Although combined therapy with streptomycin and sulfadiazine has yielded the most satisfactory results to date in this clinic, the intensive investigations on other antibiotics going on at the present time may bring forth other agents more effective against Brucella than streptomycin."

## ALARM ABOUT DOCTOR SHORTAGE IN U. S. 'UNJUSTIFIED'—JOURNAL

*Number of Doctors Increasing Even More Rapidly Than General Population; Restudy of Estimates Asked*

Alarm about a shortage of physicians in the United States is "unwarranted and unjustified," and is making medical education "the center of disagreeable and wholly unnecessary controversy," according to an editorial in the February 28 issue of *The Journal of the American Medical Association.*

The editorial follows:

"The pronouncement by Dr. Thomas Parran, surgeon general of the U. S. Public Health Service, that the country is faced with a shortage of 30,000 to 50,000 physicians by 1960 has recently been reemphasized by the federal security administrator, M. Oscar Ewing. Many government officials, as well as the public, have been led to believe that urgent measures are required to prevent a grave shortage of medical care. Alarm is unwarranted and unjustified. Actually the number of physicians is increasing at a relatively more rapid rate than is the general population. Ten years ago the statistics indicated one active physician for every 800 persons in this country; at present there is one physician for every 760 persons; by 1960 there will be one physician for every 700 persons or fewer. More physicians are currently being trained in this country than at any time in our history. All indications point to a still further increase in the number of physicians graduated each year.

"During the period 1920 to 1939 the average number of physicians graduated annually in this country was 4,256. For the eight year period 1940 to 1947 when, due to the accelerated program, nine classes were graduated, the average size of the graduating classes was 5,379. Based on the present capacity of the medical schools, the average number of physicians who will be graduated each year for the next 12 years can be conservatively estimated at 5,500; a considerably larger number may actually be anticipated as a result of expansions that are already under way. The annual production of physicians is now approximately 1,250, or about 30 per cent greater than the average annual production during the period 1920 to 1939.

*Public Health Service Figures Criticized*

"In estimating a shortage of 30,000 physicians by 1960 Dr. Parran made the incorrect assumption that only 111,000 physicians would be graduated during the period 1940 to 1960 and that 77,000 physicians would die or retire during the same years. A strange error was the subtraction of certain physicians twice from the ranks of those active, once when they retired and a second time when they died. After correcting for these errors and the reduced requirements of the government services, the Public Health Service by inference, but not explicitly, revised downward its estimated shortage of physicians from 30,000 to 20,000. A deficit of 20,000 physicians in 1960 would be less than nine per cent of the total force of physicians who will be active on that date under the current rate of production.

"In reaching an anticipated shortage of 55,000 physicians by 1960 the Public Health Service took the 12 states with the highest ratio of physicians to population and calculated the additional number of physicians needed to bring the remaining 36 states up to the average of the upper 12. This exercise in arithmetic makes the doubtful assumption that the 12 states used as a standard do not have more physicians than they actually need to provide their residents with adequate medical care. A significant number of the physicians in the 12 states with the highest ratio of physicians to population hold teaching, research and administrative positions that do not exist and for which there is no need in the other 36 states.

*Need for Doctors Less Than Estimated*

"Even Dr. Parran's lower estimate of a deficit of 20,000 physicians used as a yardstick concepts of medical service that are not realistic in terms of what the nation now, or in the period under consideration, is likely to demand or support. If the needs for additional physicians in certain categories listed by the Public Health Service were to be met, the need for physicians in other situations would be appreciably lessened. The employment of an additional 13,000 physicians by the federal services, the employment of an additional 5,000 physicians in full time local health departments and new mental and tuberculosis hospitals, and the appointment of an additional 16,000 specialists to the staffs of new general hospitals would probably decrease considerably the need for physicians otherwise required to provide medical service.

"Associated with the publicity about the shortage of physicians have been proposals which would force our medical schools to adopt meas-

ures that would impair the quality of medical education. Thus the spokesman for the Public Health Service said that the country would need to increase its present output of physicians by 50 per cent or more during the intervening years to meet the defict anticipated by 1960. Such a move could be accomplished only by a tremendous lowering of the standards of medical education that have been developed for the protection of the public during the past 40 years. Medical schools in this country are now accepting the maximum number of students that can be trained with the personnel and facilities available.

*Warn Against Lowering Medical Standards*

"Facilities for providing a high quality of medical education cannot be developed overnight. Substandard medical schools have now almost completely disappeared from the medical scene in this country; any move that would encourage their reappearance must be condemned. The facilities for medical education in this country are undergoing a definite, well ordered expansion. Four new four year schools have been developed during the past few years; two more, the University of Washington and the University of California at Los Angeles, are in the process of development; several of the schools of the basic medical sciences are making definite plans to become four year schools, and the establishment of entirely new schools is under active consideration in a number of states. Such expansions, based on sound planning, will satisfactorily eliminate any actual shortage of physicians that may be imminent.

"Advocates of radical proposals which would deteriorate standards of medical education do not hesitate to imply that the American Medical Association for economic reasons limits the production of physicians in this country. This charge is entirely without basis! The association has never sought to limit the number of properly conducted medical schools in this country. Even if the association desired to reduce either the schools or the number of students it could not do so. Through the Council on Medical Education and Hospitals, the association has always placed its support and assistance at the service of any responsible group interested in developing a new medical school. On the infrequent occasions when the association has made recommendations to any school concerning the size of its enrollment, the recommendation has been based wholly on a concern that the school not attempt to train more students than it could properly handle. No private or official body has the power to control the production of physicians in the United States. An increased production of physicians will require enterprise in establishing medical schools and the provision of sufficient funds to supply a sound educational program.

"High standards of medical education are fundamental to good medical care. The standards of medical education in this country have been raised from deplorable mediocrity to the point where they are the best in the world. The Public Health Service is concerned with the health of our nation. How can such an agency support a movement that could result in medical care of inferior quality? Conceivably the statistics and estimates regarding the number of physicians needed are being abused for political purposes, exactly as were the selective service statistics until the clear analyses by Freedman became available. The United States Public Health Service should restudy its figures and its estimates, and if its estimates of any impending deficit of physicians can be reduced, it should inform the public that any shortage that may reasonably be forecast is not critical to the nation's health. Let them tell the people that the medical schools of the United States now produce the best trained physicians to be found anywhere in the world. Far more will be lost than gained if the standards of medical education are sacrificed to an abrupt and unnecessary increase in the output of physicians.

"The Public Health Service might well join with other groups that have at least an equal concern for the nation's health in the conduct of a calm, scientific appraisal of the nation's needs for physicians and how these needs may best be met without impairing the quality of medical education and medical care. Such a study could serve as the basis for an effort supported by all concerned with the training and production of physicians to develop a sound and effective program fitted to the actual needs of the country. Such an effort is difficult as long as the propagandists continue needlessly to alarm the public and to make medical education the center of disagreeable and wholly unnecessary controversy."

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## NUTRITION SERVICES IN THE GEORGIA DEPARTMENT OF PUBLIC HEALTH

Nutrition has been recognized as a public health problem for very few years. Few state health departments employed nutritionists before 1940. It was in that year that the first nutrition consultant started work in Georgia.

The extent of malnutrition in Georgia, as in other states, can only be estimated. Few accurate figures on the nutritional status of the population are available. It is well known that gross, easily recognized deficiency states such as pellagra, beri-beri and scurvy are not common. It is also well known that the subclinical states of malnutrition are much too prevalent.

The hemoglobin level is generally considered as a fair index of the nutritional status of the individual. If this is conceded to be true we can say that the majority of the people studied in

the State are not well nourished.

In 1944 hemoglobin readings were made on over 3500 school children in Georgia. Of this number 8 per cent had readings of 14.5 Gm. or more. At the same time similar readings were made in other states. In one of these states 31 per cent of the children had hemoglobin levels of 14.5 Gm. or over, in another state 36 per cent of the children studied had readings that high.

In 1945 hemoglobin readings were made on the population of an entire village in Georgia. The median for males was 12.7 Gm., and for females 11.7 Gm.

In 1917 in one county in Georgia hemoglobin readings were made on 141 pregnant women. These readings were as follows:

| *Hb. in Gm. per 100 cc. blood* | *No. of women* |
|---|---|
| 13 or over | 5 |
| 10.1 - 12.9 | 38 |
| 10 or under | 98 |

The lowest reading was 5 Gm., and the highest 14 Gm.

In September 1947 hemoglobin readings were made on several hundred volunteers in Atlanta. Most of these were white people and the ages ranged from under 10 years to over 70 years of age. These readings follow:

| *Hb. Readings* | *No. Males* | *No. Females* |
|---|---|---|
| Under 9 Gm. | 4 | 10 |
| 9.1 - 10 | 3 | 13 |
| 10.1 - 11 | 7 | 5.9 |
| 11.1 - 12 | 48 | 167 |
| 12.1 - 13 | 59 | 104 |
| 13.1 - 14 | 125 | 38 |
| 14.1 - 15 | 67 | 6 |
| 15.1 - 16 | 13 | 3 |
| 16 | 7 | 7 |

These studies are typical of others made in the State.

A study of food consumption is another method of judging the nutritional status of people. Carefully checked studies on the food eaten by school children in various sections of the State show very poor food habits.

In one county dietary studies were made on 1376 school children. Of this number only 16 per cent scored as having adequate or good diets. In one school in another county out of 97 pupils only one had a score of adequate or good. In another county in one school of 98 pupils none rated adequate or good.

There are morbidity and mortality rates in other conditions in which nutrition may be either a major or minor factor. In 1946 there were 93 deaths from the pellagra in Georgia. Dr. W. H. Sebrell of the U. S. Public Health Service estimates that pellagra deaths are 3 per cent of the total number of clearly recognizable pellagra cases. If we use this figure it means we had 3100 definitely defined pellagra cases in the State that year.

Many authorties consider tuberculosis very largely a nutritional disease. To what extent this is true is certainly questionable but undoubtedly nutrition does play a part in the prevention and treatment of tuberculosis. In 1946 there were 1018 deaths from tubereulosis reported.

More and more studies are showing the relationship between nutrition and maternal deaths, infant deaths, stillbirths and congenital defects. No one can say the exaet number of such deaths and defects attributable to diet but they must be large. In 1946 in Georgia there were 229 maternal deaths, 3068 infant deaths and 2421 stillbirths. Also reported were 557 infants born with various deformities.

Poor diets are due to a number of factors, the major ones of which are lack of knowledge, lack of interest and inadequate ineome. The greatest handicap is lack of interest or poor eating habits. Many people who ean afford to buy adequate food and who know what they should eat have poor diets through laek of interest. The nutritionists in the Health Department have to work on these factors. They try to teach the foods that make an adequate diet and to stimulate an interest so people will want to eat the right foods. They also give advice on food buying so families may have the needed food on limited budgets.

The nutrition program is chiefly one of education and it is slow, for it is hard to change food habits. If you could inoculate school children against poor eating habits or install in a town an adequate food supply as you ean a water supply, the problem would be simple. Unfortunately no such deviee exists.

The nutrition serviee in the Georgia Department of Public Health is in the Maternal and Child Health Division. This service is headed by a nutrition consultant in the State offiee who is, at present, assisted by seven trained nutrition workers. Five of the six regional offices are now staffed with nutritionists. One nutritionist is employed to help with feeding problems in industries and institutions. This service is a joint program of the Maternal and Child Health Division and the Division of Industrial Hygiene.

The other nutritionist is working with a nutrition survey team. This team consists of a physician and a biochemist from the U. S. Public Health Service, a nurse, a technician, a nutritionist and a clerk from the Georgia Department of Public Health. The team will make studies in different places in the State to determine the nutritional status and eating habits of certain selected groups. The determination of methods of correcting nutritional deficiencies and a nutrition education program will be part of this work.

(Continued on Page 113)

## OFFICERS OF THE MEDICAL ASSOCIATION OF GEORGIA



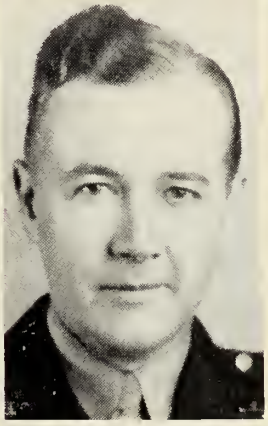
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Editor of The Journal



John W. Simmons, M.D.
Brunswick, Parliamentarian

The officers of the Medical Association of Georgia urge its members to attend the Ninety-Eighth Annual Session of the Association, Atlanta, April 27-30, 1948. Note pages 103-105 this *Journal.*

The House of Delegates will convene Tuesday, April 27, at 2:00 P. M. at the Academy of Medicine. The scientific session will open April 28 at 8:30 A.M., at the Biltmore Hotel.



Allen H. Bunce, M.D.
Atlanta
Delegate to the A.M.A.



Olin H. Weaver, M.D.
Macon
Delegate to the A.M.A.



Benj. H. Minchew, M. D.
Waycross
Delegate to the A.M.A.



Wm. R. Dancy, M.D.
Savannah
Alt. Delegate to the A.M.A.



H. Clifford Sauls, M.D.
Atlanta
Alt. Delegate to the A.M.A.
(Deceased)



C. K. Sharp, M.D.
Arlington
Alt. Delegate to the A.M.A.



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Thomasville
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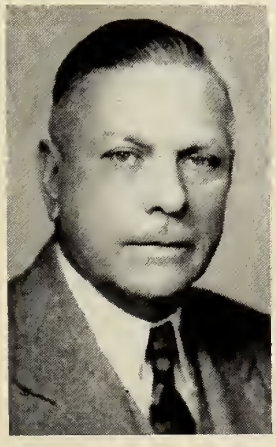
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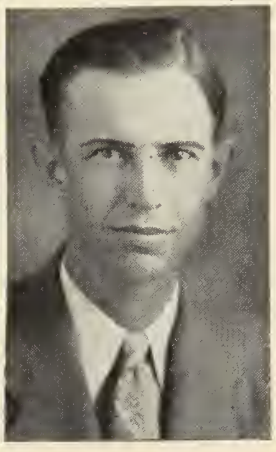
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D. H. Garrison, M.D.
Clarkesville
Vice-Councilor, Ninth District



Viola Berry
Atlanta
Executive Secretary

## MEDICAL ASSOCIATION OF GEORGIA
## NINETY-EIGHTH ANNUAL SESSION

Atlanta

April 27, 28, 29, 30, 1948

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| 10. | J. Victor Roule (1949) | Augusta |

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|---|---|
| Steve P. Kenyon, President | Dawson |
| W. F. Reavis, Chairman, Council | Waycross |
| Edgar D. Shanks, Secretary-Treasurer | Atlanta |

### *Honorary Advisory Board*

| | |
|---|---|
| W. S. Goldsmith | President, 1915-1916 |
| Eugene E. Murphey | President, 1917-1918 |
| J. W. Palmer | President, 1918-1919 |
| J. W. Daniel | President, 1923-1924 |
| Frank K. Boland | President, 1925-1926 |
| C. K. Sharp | President, 1928-1929 |
| Wm. R. Dancy | President, 1929-1930 |
| M. M. Head | President, 1932-1933 |
| C. H. Richardson | President, 1933-1934 |
| Clarence L. Ayers | President, 1934-1935 |
| James E. Paullin | President, 1935-1936 |
| B. H. Minchew | President, 1936-1937 |
| Grady N. Coker | President, 1938-1939 |
| J. C. Patterson | President, 1940-1941 |
| Allen H. Bunce | President, 1941-1942 |
| James A. Redfearn | President, 1942-1943 |
| W. A. Selman | President, 1943-1944 |
| Cleveland Thompson | President, 1944-1946 |
| Ralph H. Chaney | President, 1946-1947 |

## FULTON COUNTY MEDICAL SOCIETY

### *Officers and Committees*

| | |
|---|---|
| President | Walter W. Daniel, Atlanta |
| President-Elect | Stephen T. Brown, Atlanta |
| Vice-President | Bernard P. Wolff, Atlanta |
| Secretary-Treasurer | A. Worth Hobby, Atlanta |
| Delegate | Walter W. Daniel, Atlanta |
| Delegate | Stephen T. Brown, Atlanta |
| Delegate | A. Worth Hobby, Atlanta |
| Delegate | McClaren Johnson, Atlanta |
| Delegate | Edgar Boling, Atlanta |
| Delegate | H. Walker Jernigan, Atlanta |
| Delegate | R. Hugh Wood, Atlanta |
| Delegate | Shelley C. Davis, Atlanta |
| Delegate | Marvin Mitchell, Atlanta |
| Delegate | M. T. Benson, Jr., Atlanta |
| Delegate | W. S. Dorough, Atlanta |
| Alternate Delegate | A. V. Hallum, Atlanta |
| Alternate Delegate | Fred F. Rudder, Atlanta |
| Alternate Delegate | A. O. Linch, Atlanta |
| Alternate Delegate | J. Harry Rogers, Atlanta |
| Alternate Delegate | D. Henry Poer, Atlanta |
| Alternate Delegate | B. L. Shackleford, Atlanta |
| Alternate Delegate | Eustace A. Allen, Atlanta |
| Alternate Delegate | Vernon E. Powell, Atlanta |
| Alternate Delegate | Don F. Cathcart, Atlanta |
| Alternate Delegate | T. L. Tidmore, Atlanta |

### COMMITTEES

*All of Atlanta*

*General Committee*

E. A. Allen, Chairman; M. C. Pruitt, C. E. Rushin, J. N. Brawner, Jr., C. W. Strickler, Jr.

*Reception and Hotels*

John W. Turner, Chairman; Arthur Merrill, Reese Coleman, Regina Gabler, L. H. McDonald.

*Alumni Dinner*

University of Georgia School of Medicine

J. G. McDaniel, Chairman; B. L. Shackleford, C. M. Warnock, Mason Baird, Herbert Alden.

*Alumni Dinner*

Emory University School of Medicine

W. S. Dorough, Chairman, Vernon E. Powell, Russell Burke, Edgar Boling, Harry Rogers.

*Transportation*

J. K. Bleich, Chairman; Elisabeth Martin, Harris Dew, H. W. Minor, W. B. Duvall.

*Golf*

T. R. Staton, Chairman; J. R. Childs, W. P. Nicolson, W. A. Selman, W. B. Armstrong.

*Entertainment*

B. L. Shackleford, Chairman; M. T. Harrison, F. K. Boland, Sr., C. S. Glisson, J. B. Fitts.

*Publicity*

J. H. Byram, Chairman; Murdock Equen, C. H. Daniel, H. P. McDonald, J. K. Fancher.

*Finance*

M. F. Fowler, Chairman, L. N. Turk, Paul Beeson, T. L. Tidmore, L. H. Muse.

## MEDICAL ASSOCIATION OF GEORGIA
### Committees

*Scientific Work*
William P. Harbin, Jr., Chairman — Rome
B. E. Collins — Waycross
Carter Smith — Atlanta
Edgar D. Shanks, Secretary-Treasurer — Atlanta

*Public Policy and Legislation*
Spencer A. Kirkland, Chairman — Atlanta
J. L. Campbell — Atlanta
Edgar H. Greene — Atlanta
T. F. Sellers — Atlanta
Steve P. Kenyon — Dawson
Edgar D. Shanks, Secretary-Treasurer — Atlanta

*Medical Defense*
Marion C. Pruitt, Chairman — Atlanta
B. H. Minchew — Waycross
A. R. Rozar — Macon
Edgar D. Shanks, Secretary-Treasurer — Atlanta

*Advisory State Board of Health*
Enoch Callaway, Chairman — LaGrange
John B. Fitts — Atlanta
H. G. Weaver — Macon
D. H. Garrison — Clarkesville
Marcus Mashburn — Cumming
J. M. Barnett — Albany
J. C. Brim — Pelham
C. S. Pittman — Tifton
Clarence L. Ayers — Toccoa
W. G. Elliott — Cuthbert
C. W. Roberts (Deceased) — Atlanta

*Hospitals*
Grady N. Coker, Chairman — Canton
R. H. Oppenheimer — Atlanta
Cleveland Thompson — Millen
L. P. Holmes — Augusta
A. D. Little (Deceased) — Thomasville
Q. A. Mulkey — Millen
J. T. McCall — Rome
T. H. Clark — Douglas
D. Henry Poer — Atlanta

*Abner Wellborn Calhoun Lectureship*
James E. Paullin, Chairman — Atlanta
J. R. Broderick — Savannah
Eugene E. Murphey — Augusta
Frank K. Boland — Atlanta
Guy O. Whelchel — Athens

*Medical Economics*
Major Fowler, Chairman — Atlanta
J. C. Brim — Pelham
D. C. Kelley — Lawrenceville
T. J. Busey — Fayetteville
J. C. Keaton — Albany
C. W. Roberts (Deceased — Atlanta
G. Lombard Kelly — Augusta
Ruskin King — Savannah

*Memorial Exercises*
M. Preston Agee, Chairman — Augusta
McClaren Johnson — Atlanta
J. C. Patterson — Cuthbert
Grady N. Coker — Canton
Frank K. Boland — Atlanta
A. M. Phillips — Macon

*Medical History of Georgia*
Frank K. Boland, Chairman — Atlanta
Charles C. Harrold — Macon
J. Calvin Weaver — Atlanta
Olin H. Weaver — Macon
Eugene E. Murphey — Augusta
William R. Dancy — Savannah

*Orthopedics*
Fred G. Hodgson, Chairman — Atlanta
Thomas P. Goodwyn — Atlanta
F. Bert Brown — Savannah
J. Hiram Kite — Atlanta
L. H. Muse — Atlanta
Peter B. Wright — Augusta
W. A. Newman — Macon
Ed Irwin — Warm Springs
W. L. Funkhouser — Atlanta
Lawson Thornton — Atlanta

*Ophthalmology*
Zach W. Jackson, Chairman — Atlanta
E. N. Maner — Savannah
W. P. Rhyne — Albany
H. M. Moore — Thomasville
Herschel C. Crawford — Atlanta
I. W. Irvin — Albany
W. E. Matthews — Augusta
Mason Baird — Atlanta

*Syphilis*
Harold P. McDonald, Chairman — Atlanta
J. T. McCall — Rome
Willis P. Jordan — Columbus
Wallace Bazemore — Macon
J. Z. McDaniel — Albany
Harry Righton — Savannah
R. F. Wheat — Bainbridge
L. W. Pierce — Waycross
Hartwell Joiner — Gainesville
Robert Greenblatt — Augusta

*Industrial Health*
J. Harry Rogers, Chairman — Atlanta
Thomas P. Goodwyn — Atlanta
W. W. Chrisman — Macon
L. M. Petrie — Atlanta
W. W. Battey — Augusta
W. A. Newman — Macon
C. F. Holton — Savannah

*Clinical Pathology*
Edgar R. Pund, Chairman — Augusta
T. F. Sellers — Atlanta
A. J. Ayers — Atlanta
Thomas Harrold — Macon
Lee Howard — Savannah
Thomas J. Ferrell — Waycross
Jack C. Norris — Atlanta

*Student Loan Fund*
Mrs. Lon King, Chairman — Macon
G. Lombard Kelly — Augusta
Richard Hugh Wood — Emory University

*Scientific Exhibits*
Robert B. Greenblatt, Chairman — Augusta
J. E. Scarborough — Emory University
Lee Howard — Savannah
William F. Lake — Atlanta
John E. Walker — Columbus
Helen W. Bellhouse — Thomasville
R. N. Johnson — Rome
J. Hiram Kite — Atlanta

*Medical Preparedness*
W. A. Selman, Chairman — Atlanta
John B. Fitts — Atlanta
Edgar D. Shanks — Atlanta

*Post-Graduate Study*
G. Lombard Kelly, Chairman — Augusta
Richard Hugh Wood — Emory University
Richard Torpin — Augusta
R. H. Oppenheimer — Atlanta
Cleveland Thompson — Millen
W. F. Reavis — Waycross
Vernon E. Powell — Atlanta

*Liaison Committee—Georgia State Medical Association (Negro)*
M. T. Harrison, Chairman — Atlanta
W. E. Storey — Columbus
R. C. Maddox (Deceased) — Rome
J. F. Hanson — Macon
H. H. Allen — Decatur

*Pediatrics*
W. W. Anderson, Chairman — Atlanta
Philip Mulherin — Augusta

Frank Schley ..... Columbus
M. M. McCord ..... Rome
Howard J. Morrison ..... Savannah

*Appendicitis*

J. C. Patterson, Chairman ..... Cuthbert
J. K. Quattlebaum ..... Savannah
C. K. Wall ..... Thomasville
F. F. Rudder ..... Atlanta
F. B. Rawlings (Deceased) ..... Sandersville
B. L. Harbin ..... Rome
Kenneth McCullough ..... Waycross
R. L. Rogers ..... Gainesville
Stewart D. Brown ..... Royston
W. M. Feild ..... Albany
John W. Turner ..... Atlanta

*Awards*

William R. Dancy, Chairman ..... Savannah
T. Schley Gatewood ..... Americus
M. M. McCord ..... Rome
T. C. Williams ..... Valdosta
G. G. Lunsford ..... Atlanta
J. M. Byne, Jr. ..... Waynesboro

*Cancer Commission*

J. L. Campbell, Chairman ..... Atlanta
Everett L. Bishop ..... Atlanta
Edgar R. Pund ..... Augusta
Lee Howard ..... Savannah
Cleveland Thompson ..... Millen
A. D. Little (Deceased) ..... Thomasville
J. M. Barnett ..... Albany
R. C. Pendergrass ..... Americus
W. F. Jenkins ..... Columbus
Enoch Callaway ..... LaGrange
R. H. McDonald ..... Newnan
James J. Clark ..... Atlanta
J. E. Scarborough ..... Emory University
C. C. Harrold ..... Macon
O. C. Woods ..... Milledgeville
D. Lloyd Wood ..... Dalton
J. T. McCall ..... Rome
D. M. Bradley ..... Waycross
M. E. Winchester ..... Brunswick
Hartwell Joiner ..... Gainesville
Charles R. Andrews, Jr. ..... Canton
W. H. Roberts ..... Augusta
S. M. Talmadge ..... Athens
W. J. Murphy ..... Atlanta
Thomas Harrold ..... Macon

*Tuberculosis*

C. C. Aven, Chairman ..... Atlanta
C. D. Whelchel ..... Gainesville
R. C. McGahee ..... Augusta
R. V. Martin ..... Savannah
Warren Gilbert ..... Rome
R. C. Major ..... Augusta
H. C. Schenck ..... Atlanta
W. C. Cook ..... Columbus
E. F. Wahl ..... Thomasville
H. C. Atkinson ..... Macon
Horace E. Crow ..... Rome
A. Worthy Hobby ..... Atlanta
Rufus F. Payne ..... Rome
Bon M. Durham ..... Americus

*Advisory Woman's Auxiliary*

J. A. Redfearn, Chairman ..... Albany
James N. Brawner ..... Atlanta
W. G. Elliott ..... Cuthbert
J. E. Penland ..... Waycross
R. C. McGahee ..... Augusta
W. Bruce Schaefer ..... Toccoa
Edgar H. Greene ..... Atlanta

*Revision of Pharmacopeia of U. S.*

C. C. Aven, Chairman (1949) ..... Atlanta
Allen H. Bunce (1949) ..... Atlanta
Hal M. Davison (1949) ..... Atlanta

*Maternal Mortality and Infant Deaths*

H. F. Sharpley, Jr., Chairman ..... Savannah
C. B. Upshaw ..... Atlanta
Richard Torpin ..... Augusta
I. M. Lucas ..... Albany
David M. Wolfe ..... Albany
O. R. Thompson ..... Macon
W. C. Goodpasture ..... Atlanta
J. B. Kay ..... Byron

PREPAYMENT MEDICAL PLANS

*State Committee*

B. H. Minchew, General Chairman ..... Waycross
J. C. Keaton ..... Albany
Cleveland Thompson ..... Millen
Major Fowler ..... Atlanta
J. T. McCall ..... Rome
James J. Clark ..... Atlanta

*First District*

Lee Howard, Chairman ..... Savannah
Charles T. Brown ..... Guyton
A. B. Daniel ..... Statesboro
J. L. Elliott ..... Savannah
R. G. Brown ..... Swainsboro
Katrine Rawls ..... Sylvania
J. W. Palmer ..... Ailey
L. R. Jelks ..... Reidsville
W. W. Aiken ..... Lyons
O. D. Middleton ..... Ludowici

*Second District*

C. K. Wall, Chairman ..... Thomasville
C. H. Watt ..... Thomasville
Harry A. Wasden ..... Quitman
A. G. Funderburk ..... Moultrie
M. A. Ehrlich ..... Bainbridge
I. M. Lucas ..... Albany
J. V. Rogers ..... Cairo
D. P. Belcher ..... Pelham
C. S. Pittman ..... Tifton
J. G. Standifer ..... Blakely
G. S. Sumner ..... Sylvester

*Third District*

W. G. Elliott, Chairman ..... Cuthbert
Guy J. Dillard ..... Columbus
D. B. Ware ..... Fitzgerald
Charles Adams ..... Cordele
M. L. Malloy ..... Vienna
C. P. Savage ..... Montezuma
John Bush ..... Columbus
Albert R. Bush ..... Hawkinsville
J. C. Patterson ..... Cuthbert
T. Schley Gatewood ..... Americus
R. C. Montgomery ..... Butler
J. H. Baxter ..... Ashburn
John L. Gallemore ..... Perry

*Fourth District*

Kenneth S. Hunt, Chairman ..... Griffin
Enoch Callaway ..... LaGrange
R. L. Hammond ..... Jackson
S. F. Scales ..... Carrollton
T. J. Busey ..... Fayetteville
M. F. Cochran ..... Newnan
A. W. Carter, Jr. ..... McDonough
S. B. Traylor ..... Barnesville
R. B. Gilbert ..... Greenville
S. L. Waites ..... Covington
M. M. Head ..... Zebulon
G. L. Walker ..... Griffin
R. L. Carter ..... Thomaston

*Fifth District*

Marion C. Pruitt, Chairman ..... Atlanta
Spencer A. Kirkland ..... Atlanta
Major Fowler ..... Atlanta
L. P. Matthews ..... Atlanta
H. E. Griggs ..... Conyers

*Sixth District*

H. D. Allen, Jr., Chairman ..... Milledgeville
H. G. Weaver ..... Macon
Charles B. Fulghum ..... Milledgeville
C. H. Richardson ..... Macon

J. A. Camp ..... Roberta
C. S. Jernigan ..... Sparta
F. S. Belcher ..... Monticello
John R. Lewis ..... Louisville
Joseph D. Zachary ..... Gray
John A. Bell ..... Dublin
George H. Alexander ..... Forsyth
O. D. Lennard ..... Sandersville
S. N. Rubin ..... Gordon

*Seventh District*

W. H. Perkinson, Chairman ..... Marietta
D. Lloyd Wood ..... Dalton
A. L. Horton ..... Cartersville
W. B. Hair ..... Summerville
L. I. Welch ..... Marietta
C. V. Vansant ..... Douglasville
Lee H. Battle, Jr. ..... Rome
J. E. Billings ..... Calhoun
C. H. Allen ..... Bremen
Cecil B. Elliott ..... Cedartown
Frank L. O'Connor ..... Rossville
H. J. Ault ..... Dalton

*Eighth District*

W. F. Reavis, Chairman ..... Waycross
Alton M. Johnson ..... Valdosta
J. T. Holt ..... Baxley
T. H. Clark ..... Douglas
F. L. Mann ..... McRae
W. L. Pomeroy ..... Waycross
J. Alvin Leaphart ..... Jesup

*Ninth District*

C. B. Lord, Chairman ..... Jefferson
D. H. Garrison ..... Clarkesville
W. T. Randolph ..... Winder
J. S. Jolley ..... Homer
C. D. Whelchel ..... Gainesville
Bruce Schaefer ..... Toccoa
A. A. Rogers ..... Commerce
Marcus Mashburn, Sr. ..... Cumming
Robert T. Jones, III ..... Canton
J. A. Green ..... Clayton
Herbert Olnick ..... Decatur
L. G. Neal ..... Cleveland

*Tenth District*

Harry L. Cheves, Chairman ..... Union Point
J. Victor Roule ..... Augusta
John Simpson ..... Athens
A. S. Johnson ..... Elberton
Stewart D. Brown ..... Royston
W. H. Lewis ..... Siloam
A. O. Meredith ..... Hartwell
B. F. Riley, Jr. ..... Thomson
J. H. Nicholson ..... Madison
L. M. Huie ..... Monroe
A. W. Davis ..... Warrenton
T. C. Nash ..... Philomath
W. J. Cranston ..... Augusta

*Fraternal Delegates to Other States*

ALABAMA—J. C. Patterson, Cuthbert; John E. Walker, Columbus; Don F. Cathcart, Atlanta.

FLORIDA—J. C Tidmore, Dawson; J. C. Brim, Pelham; C. A. Henderson, Savannah.

NORTH CAROLINA—J. K. Burns, Jr., Gainesville; Murdock Equen, Atlanta; Bruce Schaefer, Toccoa.

SOUTH CAROLINA—Clarence L. Ayers, Toccoa; Ralph H. Chaney, Augusta; J. J. Pilcher, Wrens.

TENNESSEE—L. G. Neal, Cleveland; D. Lloyd Wood, Dalton; D. N. Thompson, Elberton.

### State Board of Health*

First District: James M. Byne, Jr., Waynesboro, Sept. 1, 1951.
Second District: C. K. Sharp, Arlington, Sept. 1, 1951.
Third District: J. C. Patterson, Cuthbert, Sept. 1, 1948.
Fourth District: J. A. Corry, Barnesville, Sept. 1, 1949.
Fifth District: Robert F. Maddox, Atlanta, Sept. 1, 1948.
Sixth District: C. L. Ridley, Macon, Sept. 1, 1950.
Seventh District: W. P. Harbin, Jr., Rome, Sept. 1, 1950.
Eight District: B. H. Minchew, Waycross, Sept. 1, 1950.
Ninth District: Robert L. Rogers, Gainesville, Sept. 1, 1951.
Tenth District: D. N. Thompson, Elberton, Sept. 1, 1949.

### State of Georgia at Large**

*Georgia Dental Association*

W. K. White, Savannah, Sept. 1, 1951.
J. G. Williams, Atlanta, Sept. 1, 1951.

*Georgia Pharmaceutical Association*

George Wright, Tifton, Sept. 1, 1953.
J. B. Butts, Milledgeville, Sept. 1, 1953.

*Nominated by their respective district medical societies and appointed for six year terms.
**Nominated by their respective associations.

### State Board of Medical Examiners

T. H. Clark ..... Douglas
Murdock Equen ..... Atlanta
Rufus A. Askew ..... Atlanta
Grady N. Coker ..... Canton
Steve P. Kenyon ..... Dawson
Harold P. McDonald ..... Atlanta
L. G. Neal ..... Cleveland
J. W. Palmer ..... Ailey
W. H. Wall ..... Blakely
R. F. Wheat ..... Bainbridge

## DISTRICT SOCIETIES

### Officers and Meeting Dates

*First District*

President—J. M. Byne, Jr., Waynesboro
Secretary—Wm. D. Wilson, Savannah
Third Wednesday—March and July.

*Second District*

President—John P. Tucker, Bainbridge
Secretary—J. C. Brim, Pelham
Second Thursday—April and October

*Third District*

President—Albert Bush, Hawkinsville
Secretary—Robert C. Pendergrass, Americus
Third Wednesday in June—Second Wednesday in November

*Fourth District*

President—Kenneth D. Grace, LaGrange
Secretary—James A. Johnson, Jr., Manchester
Second Wednesday—February and August.

*Fifth District*

President—D. Henry Poer, Atlanta
Secretary—L. M. Blackford, Atlanta
No set dates

*Sixth District*

President—Thos. L. Ross, Macon
Secretary—A. M. Phillips, Macon
Last Wednesday in June—First Wednesday in December

*Seventh District*

President—D. Lloyd Wood, Dalton
Secretary—Lee H. Battle, Jr., Rome
First Wednesday in April—last Wednesday in September

*Eighth District*

President—D. A. Jardine, Douglas
Secretary—G. T. Crozier, Valdosta
Second Tuesday—April and October

*Ninth District*

President—Pratt Cheek, Gainesville
Secretary—Hartwell Joiner, Gainesville
Dates not specified

*Tenth District*

President—C. E. Wills, Washington
Secretary—M. C. Adair, Washington
Second Wednesday—February and August.

## DELEGATES TO THE 1943 SESSION

| COUNTIES | NAMES AND ADDRESSES |
|---|---|
| Appling | C. I. Bryans, Jr., Baxley |
| Baldwin | S. A. Anderson, Milledgeville |
| Banks | |
| Bartow | George Cauble, Cartersville |
| Ben Hill | |
| Bibb | C. N. Wasden, Macon |
| | Thos. L. Ross, Macon |
| Blue Ridge | James M. Burdine, Blue Ridge |
| Brooks | A. B. Jones, Jr., Quitman |
| Bulloch-Candler-Evans | J. H. Whiteside, Statesboro |
| Burke | |
| Carroll-Douglas-Haralson | S. F. Scales, Carrollton |
| Chatham— | |
| Georgia Medical Society | |
| Chattooga | |
| Cherokee-Pickens | Arthur M. Hendrix, Ball Ground |
| Clarke | James A. Green, Jr., Athens |
| Clayton-Fayette | Y. R. Coleman, Jonesboro |
| Cobb | Luke Garrett, Jr., Austell |
| Coffee | Dan A. Jardine, Douglas |
| Colquitt | J. B. Woodall, Moultrie |
| Coweta | H. C. Glover, Jr., Newnan |
| Crisp | P. L. Williams, Cordele |
| Decatur-Seminole | R. F. Wheat, Bainbridge |
| DeKalb | |
| Dooly | O. W. Kitchens, Byromville |
| Dougherty | W. M. Feild, Albany |
| Elbert | A. S. Johnson, Elberton |
| Emanuel | C. E. Powell, Swainsboro |
| Floyd | Lee H. Battle, Jr., Rome |
| Forsyth | Marcus Mashburn, Sr., Cumming |
| Franklin | R. E. Ridgway, Royston |
| Fulton | Walter W. Daniel, Atlanta |
| | Stephen T. Brown, Atlanta |
| | A. Worth Hobby, Atlanta |
| | McClaren Johnson, Atlanta |
| | Edgar Boling, Atlanta |
| | H. Walker Jernigan, Atlanta |
| | R. Hugh Wood, Atlanta |
| | Shelley C. Davis, Atlanta |
| | Marvin Mitchell, Atlanta |
| | M. T. Benson, Jr., Atlanta |
| | W. S. Dorough, Atlanta |
| Glynn | B. W. Harris, St. Simons Island |
| Gordon | W. D. Hall, Calhoun |
| Grady | |
| Greene | F. H. Killam, Greensboro |
| Gwinnett | |
| Habersham | C. T. Hardman, Tallulah Falls |
| Hall | C. D. Whelchel, Gainesville |
| Hancock | C. S. Jernigan, Sparta |
| Hart | Louis G. Cacchioli, Hartwell |
| Henry | Gordon R. Foster, Jr., McDonough |
| Houston-Peach | A. Smoak Marshall, Fort Valley |
| Jackson-Barrow | Alexander B. Russell, Winder |
| Jasper | F. S. Belcher, Monticello |
| Jefferson | C. Roy Williams, Wadley |
| Jenkins | Cleveland Thompson, Millen |
| Lamar | |
| Laurens | A. G. Bell, Wrightsville |
| Macon | Thos. M. Adams, Montezuma |
| McDuffie | B. F. Riley, Jr., Thomson |
| Meriwether-Harris | J. A. Johnson, Jr., Manchester |
| Mitchell | J. C. Brim, Pelham |
| Monroe | George H. Alexander, Forsyth |
| Montgomery | J. W. Palmer, Ailey |
| Morgan | W. C. McGeary, Madison |
| Muscogee | L. H. Wolff, Columbus |
| | F. D. Edwards, Columbus |
| Newton | |
| Ocmulgee: Bleckley-Dodge-Pulaski | |
| Polk | P. A. Chaudron, Cedartown |
| Rahun | |
| Randolph-Terrell | J. C. Tidmore, Dawson |
| Richmond | R. C. McGahee, Augusta |
| | George W. Wright, Augusta |
| Rockdale | Harvey E. Griggs, Conyers |
| Screven | |
| South Georgia Medical Society— | |
| Berrien-Clinch-Cook-Echols-Lanier-Lowndes | A. G. Little, Jr., Valdosta |
| Spalding | H. J. Copeland, Griffin |
| Stephens | W. Bruce Schaefer, Toccoa |
| Sumter | |
| Tattnall | A. G. Pinkston, Glennville |
| Taylor | R. C. Montgomery, Butler |
| Telfair | S. T. Parkerson, McRae |
| Thomas | Mervin B. Wine, Thomasville |
| Tift | R. E. Jones, Tifton |
| Toombs | |
| Tri-County Society— | |
| Calhoun-Early-Miller | J. G. Standifer, Blakely |
| Tri-County Society— | |
| Liberty-Long-McIntosh | |
| Troup | |
| Turner | |
| Upson | J. M. Kellum, Thomaston |
| Walker-Catoosa-Dade | Fred H. Simonton, Chickamauga |
| Walton | Homer Head, Monroe |
| Ware | W. F. Reavis, Waycross |
| Warren | H. T. Kennedy, Warrenton |
| Washington | |
| Wayne | Fred M. Harper, Jesup |
| Whitfield | Truman Whitfield, Dalton |
| Wilcox | J. M. Estes, Abbeville |
| Wilkes | M. C. Adair, Washington |
| Worth | |

## ANNOUNCEMENTS

Be sure to go to the Registration Desk at the Academy of Medicine after your arrival, present your 1943 membership card, register and procure a badge and program.

Discussion of papers is open to all members and guests of the Association; it is not limited to those named on the program.

On arising to discuss a paper the speaker will please announce his name and address clearly for the benefit of the Association and the reporter.

Meetings will be called to order at the hour fixed on the program. It is especially desired that the members be prompt in their attendance.

All manuscript should be typewritten, double spaced, and on one side of the paper only. Papers must be handed to the reporter immediately after being read.

## IMPORTANT NOTICE

Delegates must present written credentials to the Committee on Credentials of the House of Delegates to secure delegates' badges.

Members may not take part in the proceedings until they have registered and procured official badges.

## PUBLIC MEETINGS

Biltmore Hotel

WEDNESDAY, APRIL 28, 8:30 A. M.
Opening Meeting

WEDNESDAY, APRIL 28, 8:00 P. M.
*Eastern Standard Time*

Presentation of the President's Gold Key to President Steve P. Kenyon, Dawson, by J. C. Patterson, Cuthbert.

THURSDAY, APRIL 29, 12:00 NOON
President's Address
*Current Problems of Organized Medicine*
Steve Paschal Kenyon, Dawson

The President's Address will be at an open session to which the public and visitors are invited.

MEMORIAL EXERCISES
M. Preston Agee, Augusta
Chairman, Committee on Necrology

## ENTERTAINMENTS

Wednesday, April 28, 1:00 P. M.
Atlanta Athletic Club

Luncheon of the American Medical Women's Association.

Wednesday, April 28, 6:30 P. M.
Biltmore Hotel

Annual dinner of the alumni of Emory University School of Medicine. W. S. Dorough, Chairman.

Annual dinner of the alumni of University of Georgia School of Medicine. J. G. McDaniel, Chairman.

Thursday, April 29, 12:30 P. M.
Biltmore Hotel

Annual luncheon of the Georgia Pediatric Society.

Meeting of the Fellows of the American Academy of Pediatrics will follow immediately.

Thursday, April 29, 1:00 P. M.
Biltmore Hotel

Annual luncheon of the Georgia Eye, Ear, Nose and Throat Society.

Thursday, April 29, 1:00 P. M.

Annual luncheon of the Georgia Radiological Society.

Thursday, April 29, 7:30 P. M.
Biltmore Hotel, Georgian Ball Room

Annual banquet of the Medical Association of Georgia. Dance.

## MEETINGS OF THE HOUSE OF DELEGATES

Academy of Medicine
Tuesday, April 27, 2:00 P. M.
*Eastern Standard Time*

First meeting of the House of Delegates

1. Call to order by the President
2. Roll Call
3. Appointment of Reference Committees
4. Reports of officers:
   - President
   - President-Elect
   - Vice-Presidents
   - Parliamentarian
   - Secretary-Treasurer: Financial report
   - Reports of Delegates to the A.M.A.
5. Reports of committees:
   - Scientific Work
   - Public Policy and Legislation
   - Arrangements
   - Medical Defense
   - Hospitals
   - Necrology
   - Cancer Commission
   - History
   - Abner Wellborn Calhoun Lectureship
   - Awards
   - Advisory—Woman's Auxiliary
   - Medical Economics
   - Orthopedics — Advisory, State Department of Public Welfare.
   - Ophthalmology—Advisory, State Department of Public Welfare
   - Syphilis
   - Tuberculosis
   - Special Committees
6. Unfinished business
7. New business

Tuesday, April 27, 8:00 P. M.
*Eastern Standard Time*
Academy of Medicine

Second meeting of the House of Delegates

1. Call to order by the President
2. Reading of minutes
3. Announcements
4. Report of President of Woman's Auxiliary
5. Reports of committees (continued)
6. Reports of Fraternal Delegates
7. Unfinished business
8. New business

Friday, April 30, 8:30 A. M.
*Eastern Standard Time*
Biltmore Hotel, Pompeian Room

Third meeting of the House of Delegates

1. Call to order by the President
2. Reading of minutes
3. Reports of committees
4. Unfinished business
5. New business

## OFFICIAL REPORTER

Miss Winifred H. McLean..... Gastonia, N. C.

## MEETINGS OF THE COUNCIL

Tuesday, April 27, 4:30 P. M.
*Eastern Standard Time*
Academy of Medicine

The first meeting of the Council will be held Tuesday, April 27, following the afternoon session of the House of Delegates. Each Councilor will render a report of conditions of each county of his district. Other meetings of the Council will be held on the call of the chairman.

## SCIENTIFIC PROGRAM

Wednesday, April 28, 8:30 A. M.
*Eastern Standard Time*
Biltmore Hotel

The papers for each meeting *must* be read as scheduled on the program.

Call to order by the President, Steve Paschal Kenyon, Dawson.

*Invocation*
Rev. Rembert Sisson, Atlanta,
Pastor, Haygood Memorial Methodist Church.

*Address of Welcome*
Walter Wright Daniel, Atlanta,
President, Fulton County Medical Society

*Response to Address of Welcome*
James A. Redfearn, Albany

## SCIENTIFIC PROGRAM

Wednesday, April 28, 8:30 A. M.
*Eastern Standard Time*
Biltmore Hotel

*The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.*

1. Pyloric Obstructions: A Correlation of Clinical Histories With Roentgen Observations.
   Arthur G. Singer, Toccoa.
2. The Effects of Various Spasmolytics and Spasmogenics on Human Gastric Motility.
   George P. Child, Augusta.
   Charles W. Hock, Augusta.
3. Preoperative Treatment for Gallbladder Surgery.
   Thomas N. Freeman, Jr., LaGrange.
4. Functional Disturbances of the Large Bowel.
   Charles W. Hock, Augusta.

Recess of 30 minutes to visit exhibits at the Academy of Medicine. Free refreshments in basement of the Academy.

5. Polyps of the Colon: Their Origin and Growth.
   John S. Atwater, Atlanta.
6. The Management of Residual Common Duct Stones.
   Duncan Shepard, Atlanta.
7. Early Ambulation in Major Abdominal Surgery.
   Irving L. Greenberg, Atlanta.
8. Surgery of the Thyroid.
   Charles H. Richardson, Macon.
   Charles H. Richardson, Jr., Macon.
   To lead the discussion:
   McClaren Johnson, Atlanta.
   William R. Dancy, Savannah.
   C. H. Watt, Thomasville.
   J. C. Patterson, Cuthbert.

WEDNESDAY, APRIL 28, 12:00 NOON
*Eastern Standard Time*
Biltmore Hotel
ABNER WELLBORN CALHOUN LECTURE
*On the Relief of Suffering Within the Hospital*
Henry K. Beecher, Boston,
Dorr Professor of Research in Anesthesia,
Harvard Medical School;
Anesthetist-in-Chief, Massachusetts General Hospital.
Introduction by James E. Paullin, Atlanta.

WEDNESDAY, APRIL 28, 2:30 P. M.
*Eastern Standard Time*
Academy of Medicine

*The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.*

1. Pulmonary Vascular Obstruction Due to Sarcoid.
   Wm. P. Harbin, Jr., Rome.
   Edward L. Bosworth, Rome.
2. Syphilitic Gumma of Aortic Valve and Left Ventricle, Aneurysm of the Sinus of Valsalva, With Demonstration of Treponema Pallida.
   D. F. Mullins, Jr., Athens.
3. Coronary Artery Disease Presenting Atypical Symptoms.
   Ernest F. Wahl, Thomasville.
4. Androgen Therapy in Coronary Disease.
   John W. Brittingham, Augusta.
5. The Use of Anticoagulants in Acute Myocardial Infarction.
   Sandy B. Carter, Atlanta.
   To lead the discussion:
   Thomas Ross, Macon.
   Charles F. Stone, Jr., Atlanta.
   Recess of 20 minutes to visit exhibits at the Academy of Medicine. Free refreshments in basement of the Academy.
6. Streptomycin in the Therapy of Granuloma Inguinale: Report of 100 Cases.
   Calvin H. Chen, Augusta.
   Robert B. Greenblatt, Augusta.
   Robert B. Dienst, Augusta.
7. Streptomycin and Tuberculosis.
   Carl C. Aven, Atlanta.
   Joe S. Cruise, Atlanta.
8. The Treatment of Influenzal Meningitis With Streptomycin and Sulfadiazine.
   Joseph Yampolsky, Atlanta.
   John Paul Jones, Macon.
   To lead the discussion:
   Albert Heyman, Atlanta.
   Rufus F. Payne, Rome.
   Ruskin King, Savannah.
   Refreshments (*improved*) basement of the Academy of Medicine.

WEDNESDAY, APRIL 28, 8:00 P. M.
*Eastern Standard Time*
Biltmore Hotel

Presentation of the President's Gold Key to the President, Steve Paschal Kenyon, Dawson, by J. C. Patterson, Cuthbert.

*Coronary Artery Heart Disease.*
George R. Herrmann, Galveston, Texas.
Professor of Medicine, University of Texas School of Medicine.
Introduction by Paul Beeson, Atlanta.

*Recent Concepts Regarding the Spread and Treatment of Poliomyelitis.*
Robert B. Lawson, Winston-Salem, North Carolina, Associate Professor of Pediatrics, The Bowman Gray School of Medicine, Wake Forest College.
Introduction by Edwin R. Watson, Macon.

*A New Concept Concerning the Pathogenesis of Certain Disorders Associated with Aging.*
Thomas Findley, New Orleans, Louisiana, Head of Department of Medicine, Ochsner Clinic; Associate Professor of Clinical Medicine, Tulane University of Louisiana School of Medicine.
Introduction by William P. Harbin, Jr., Rome.

THURSDAY, APRIL 29, 8:30 A. M.
*Eastern Standard Time*
Biltmore Hotel

*The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.*

1. Modern Clues to the Early Identification and Proper Treatment of Carcinoma of the Lung.
   Osler A. Abbott, Atlanta.
   William A. Hopkins, Atlanta.
2. Testicular Neoplasms.
   Glenn J. Bridges, Atlanta.
3. The Palliative Effect of Androgens in the Management of Ovarian Malignancy.
   Ralph H. Chaney, Augusta.
   Robert B. Greenblatt, Augusta.
4. Carcinoma of the Corpus Uteri.
   Robert L. Brown, Emory University.
5. Some Features of the Chemistry of Cancer of the Breast.
   John Funke, Atlanta.
6. Radium Irradiation of the Nasopharnyx for Hypertrophy of Lymphoid Tissue.
   B. H. Minchew, Waycross.
   B. E. Collins, Waycross.
   To lead the discussaion of papers 1, 2, 3, 4, 5 and 6:
   Robert C. Major, Augusta.
   E. N. Maner, Savannah.
   Recess of 30 minutes to visit exhibits at the Academy of Medicine. Free refreshments in basement of the Academy.
7. Brachial Neuralgia Due to Cervical Intervertebral Disc Lesions.
   Exum Walker, Atlanta.
8. Facial Palsies.
   William A. Smith, Atlanta.
9. Head Enlargement in Infants.
   Charles E. Dowman, Atlanta.
   To lead the discussion of papers 7, 8 and 9:
   W. A. Risteen, Augusta.
   Richard Wilson, Atlanta.

THURSDAY, APRIL 29, 12:000 NOON
*Eastern Standarda Time*
Biltmore Hotel

President's Address
*Current Problems of Organized Medicine*
Steve Paschal Kenyon, Dawson

MEMORIAL EXERCISES
M. Preston Agee, Augusta
Chairman, Committee on Necrology.

THURSDAY, APRIL 29, 2:30 P. M.
*Eastern Standard Time*
Academy of Medicine

*The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.*

1. Maternity Services in Rural Areas.
   Guy V. Rice, Atlanta.
2. The Clinical and Histological Aspects of the Herxheimer Reaction.
   Albert Heyman, Atlanta.
   Walter H. Sheldon, Atlanta.
3. Hematologic Problems and Their Management.
   Jack C. Norris, Atlanta.
   To lead the discussion:
   T. F. Sellers, Atlanta.
   D. F. Mullins, Jr., Athens.
4. Congenital Metatarsus Varus.
   J. H. Kite, Atlanta.
5. Physical Measures in Rehabilitation of the Hand.
   Arthur M. Pruce, Atlanta.
   To lead the discussion of papers 4 and 5:
   Ed Irwin, Warm Springs.
   Peter B. Wright, Augusta.
   Recess of 20 minutes to visit exhibits at the Academy of Medicine. Free refreshments in basement of the Academy.

6. Acute Acquired Hemolytic Anemia in the Negro,
   Curtis Carter, Augusta.
   E. S. Armstrong, Albany.
   V. P. Sydenstricker, Augusta.
7. Anemia in Labor.
   Bothwell Traylor, Augusta.
   Richard Torpin, Augusta.
8. Hemorrhage in the Third Stage of Labor.
   Marion T. Benson, Jr., Atlanta.

To lead the discussion of papers 6, 7 and 8:
R. A. Bartholomew, Atlanta.
Lee Howard, Savannah.

Refreshments (*improved*) basement of the Academy of Medicine. Get ready for the banquet.

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Friday, April 30, 9:00 A. M.
*Eastern Standard Time*
Academy of Medicine

*The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.*

1. Is Cholesterol Metabolism Getting Enough Attention in Early Coronary Disease?
   W. W. Blackman, Atlanta.
   John M. Walton, Atlanta.
2. The Fallacy of the Basal Metabolic Rate.
   James K. Fancher, Atlanta.
3. Rocky Mountain Spotted Fever: Case History and Autopsy Findings.
   Max Reynolds, Cairo.
   Elmer Hill, Thomasville.

   To lead the discussion:
   R. Hugh Wood, Atlanta.
   R. A. Vonderlehr, Atlanta.
4. The Cystoscopic Extraction of Ureteral Calculi.
   Charles Eberhart, Atlanta.
   James L. Campbell, Jr., Atlanta.
5. Central Nervous System Syphilis: Comparisons of Treatment.
   V. M. Pennington, Milledgeville.
6. Propionic Acid in the Treatment of Vulvovaginitis.
   Roland R. Suran, Augusta.
   Robert B. Greenblatt, Augusta.

   To lead the discussion of papers 4, 5 and 6:
   Rudolph Bell, Thomasville.
   W. F. Reavis, Waycross.

   Recess of 20 minutes. Free refreshments in the basement of the Academy.
7. The Value of the Uterosacral Ligaments in Uterine Displacements.
   Albert L. Evans, Atlanta.
   Olin S. Cofer, Atlanta.
8. A Nutritional Survey of School Children in Grady County, Georgia.
   Helen W. Bellhouse, Thomasville.
   Arthur Hill, Thomasville.

   To lead the discussion of papers 7 and 8:
   Edward G. Jones, Jr., Eastman.
   Philip Mulherin, Augusta.

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## ELECTION OF OFFICERS

Friday, April 30, 12:00 Noon
*Eastern Standard Time*
Academy of Medicine

President-Elect
First Vice-President
Second Vice-President
Delegates to the A. M. A.
Selection of meeting place for 1949.

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## CONSTITUTION AND BY-LAWS

Chapter II, Section 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Chapter VIII, Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Chapter VIII, Section 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

No miscellaneous or business matters will be discussed before the scientific meetings, but will be referred to the House of Delegates.

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*Resolution Adopted* 1921

Resolved: That a member who sends in a title of a paper to be placed on the program and is not present to read the paper shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

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We are instructed by the President to announce to all essayists that the sessions of the Scientific Program of the Associtaion will begin on time, and that the above regulations of the By-Laws in reference to the program will be strictly enforced.

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Committee on Scientific Work

William P. Harbin, Jr., Chairman ..... Rome
B. E. Collins ..... Waycross
Carter Smith ..... Atlanta
Edgar D. Shanks, Secretary-Treasurer ..... Atlanta

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## IN MEMORIAM

Alford, Alex Eckel Bryan, Bainbridge, January 14, 1948, aged 72.
Baker, Elliott L., Columbus, January 10, 1948, aged 73.
Barksdale, Cobb Rutherford, Blakely, May 23, 1947, aged 70.
Baughn, Edgar Buren, Colquitt, October 26, 1947, aged 63.
Benson, Marion Trotti, Sr., Atlanta, September 3, 1947, aged 70.
Bivings, Franklin Carlisle, Atlanta, August 7, 1947, aged 63.
Brantley, John Q., Atlanta, November 21, 1947, aged 67.
Brooks, James Henry, Decatur, August 22, 1947, aged 79.
Brown, Peter James, Conyers, May 24, 1947, aged 67.
Bugg, Luther Francis, Carnegie, October 3, 1947, aged 72.
Byne, William Marcus, Griffin, May 9, 1947, aged 78.
Coleman, Warren, Augusta, February 13, 1948, aged 79.
Coleman, Warren Ashley, Eastman, June 15, 1947, aged 52.
Crook, Whitfield Walker, Cuthbert, November 11, 1947, aged 68.
Daniel, James Samuel, Harlem, September 6, 1947, aged 76.
Exley, Howard Trivers, Savannah, October 22, 1947, aged 53.
Evans, Archie Paul, Hawkinsville, August 29, 1947, aged 41.
Fountain, James Andrew, Macon, June 26, 1947, aged 54.
Freeman, Alexander Rutherford, Albany, March 29, 1947, aged 42.
Frye, Augustus Harris, Griffin, August 6, 1947, aged 54.
Gilbert, William Leak, Atlanta, May 7, 1947, aged 81.
Goodrich, William Harry, Augusta, April 26, 1947, aged 74.
Green, Albert Jefferson, Union City, October 23, 1947, aged 65.
Heriot, George W., Sr., Savannah, January 4, 1948, aged 80.
Hickson, Marcus LaFayette, Fort Valley, June 17, 1947, aged 55.
Hitchcock, Cecil Marvin, Moultrie, June 5, 1947, aged 64.
Holden, Farish Clay, Atlanta, July 15, 1947, aged 47.
Jenkins, Joseph Isham, Hartwell, Mar. 16, 1943, aged 72.
Johnson, Ben Terrell, Sr., Bluffton, January 19, 1948, aged 59.
Johnson, James F., Hiawassee, ..... aged 80.
Little, Arthur Dillard, Thomasville, October 16, 1947, aged 66.
Lyon, Gustavus T., Roswell, July 1, 1947, aged 82.

Maddox, Robert Cooley, Rome, February 23, 1948, aged 55.
McCorkle, Robert Louis, Atlanta, June 15, 1947, aged 30.
McCrary, Harrison Lee, Royston, April 22, 1947, aged 81.
McCurdy, James William, Thomaston, April 28, 1947, aged 37.
McMath, John F., Americus, January 22, 1948, aged 92.
Meadows, John Marvin, Vidalia, January 22, 1948, aged 87.
Miller, David G., Doraville, January 20, 1948, aged 84.
Mitchell, Amanda J., Juliette, March 23, 1947, aged 85.
Myers, Guy Arthur, Atlanta, September 24, 1947, aged 39.
Overstreet, Edward Jennings, Baxley, June 2, 1947, aged 49.
Peniston, Paul, Newnan, November 13, 1947, aged 80.
Phillips, Hugh Kingsley, Helen, May 18, 1947, aged 67.
Pirkle, Noah G., Buford, January 5, 1948, aged 76.
Powers, Robert John, Sandy Springs, September 2, 1947, aged 76.
Rawlings, Frederick Bangs, Sandersville, January 16, 1948, aged 59.
Redwine, Word, Madras, August 4, 1947, aged 76.
Reynolds, Harold Irwin, Athens, October 30, 1947, aged 60.
Rice, John D., Hiawassee, January 23, 1948, aged 73.
Roberts, Charles Wesley, Atlanta, July 28, 1947, aged 64.
Sauls, Henry Cliff, Atlanta, July 15, 1947, aged 60.
Smith, Archibald, Atlanta, December 19, 1947, aged 73.
Smith, Samuel F., Glennville, February 19, 1948, aged 73.
Stinchcomb, Robert P., Pendergrass, September 23, 1947, aged 76.
Teasley, Banager Columbus, Hartwell, March 10, 1948, aged 72.
Terrell, John Henry, Toccoa, November 20, 1947, aged 69.
Thomas, Joseph Atkinson, Valdosta, December 21, 1947, aged 63.
Thomson, Ralph Methvin, Savannah, March 24, 1947, aged 72.
Watkins, Andrew Rufus, Chamblee, September 2, 1947, aged 82.
Wells, W. Frank, Atlanta, November 7, 1947, aged 63.
Williams, Benjamin Franklin, Atlanta, January 8, 1948, aged 64.
Whittle, William Early, Iron City, July 22, 1947, aged 71.

## SCIENTIFIC EXHIBITS

Academy of Medicine

*A Method of Presenting Clinical Pathologic Conferences with the Use of Kodachrome Slides*—Charles L. Blumstein, Pathologist, City Hospital, Columbus.

*A Simplified Technic of Bronchography*—Osler A. Abbott and William A. Hopkins, Emory University School of Medicine, Division of Chest Surgery, Atlanta.

*Anticoagulant Therapy*—Carter Smith, Charles F. Stone, Jr., F. Levering Neely, and Eugene Hanes, Atlanta.

*Cancer Commission*—Medical Association of Georgia.

*Essentials in the Management of Elbow Fractures*—Calvin Sandison, Atlanta.

*Good Samaritan Clinic*—T. Luther Byrd, Atlanta.

*Medical Genetics*—Clyde E. Keeler, Georgia State College for Women, Milledgeville.

*Practical Aspects of Prothrombin Determination in the Regulation of Anticoagulant Therapy*—David F. James and J. J. Butler, Emory University School of Medicine, Atlanta.

*Skin Cancer, Treatment of Eye Lid Lesions With Combined Electro-Surgical and Radiation Technic*—Philip H. Nippert, Atlanta.

*Studies in Hysterosalpingography*—George A. Williams and John B. Varner, Atlanta.

*The Use of Colostomies in Colon Surgery*—David Henry Poer, Atlanta.

*The Value of Vaginal and Cervical Spreads for Early Recognition of Carcinoma*—Edgar R. Pund and H. E. Nieburgs, University of Georgia School of Medicine, Department of Pathology, Augusta.

*Common Lesions of the Gastro-Intestinal Tract*—Stephen W. Brown, Department of Radiology and Charles W. Hock, Department of Medicine, University of Georgia School of Medicine, Augusta.

*Correlation of Body Temperature, Vaginal Spreads and Edometrial Biopsies in Normal and Endocrinopathic States*—H. E. Nieburgs and Robert B. Greenblatt, Department of Endocrinology, University of Georgia School of Medicine, Augusta.

*Streptomycin in the Therapy of Granuloma Inguinale*—Robert B. Greenblatt, Robert B. Dienst, Calvin H. Chen and Roland R. Suran, University of Georgia School of Medicine, Augusta.

## TECHNICAL EXHIBITS

Academy of Medicine

1. Ciba Pharmaceutical Products, Inc.
   556 Morris Avenue, Summit, N. J.
2. Wm. P. Poythress & Company, Inc.
   Richmond, Va.
3. Carnation Company
   Oconomowoc, Wis.
4. American Surgical Supply Company
   489 Peachtree Street, N. E., Atlanta, Ga.
5. Mead Johnson & Company
   Evansville 21, Ind.
   J. H. Gilmore, 1672 Emory Road, N. E., Atlanta, Ga.
6. C. B. Fleet Company, Inc.
   921-927 Commerce Street, Lynchburg, Va.
   W. E. Avery, 127 Ponce de Leon Court, Decatur, Ga.
7. Van Pelt and Brown, Inc.
   Richmond, Va.
8. Brayten Pharmaceutical Company
   3802 St. Elmo Avenue, Chattanooga, Tenn.
   Ben Perryman, P. O. Box 242, Atlanta, Ga.
9. Smith, Kline & French Laboratories
   Fifth and Arch Streets, Philadelphia 5, Pa.
11. Camel Cigarettes
    1 Pershing Square, New York 17, N. Y.
12. Kremers-Urban Company
    141 West Vine Street, Milwaukee 12, Wis.
13. Ortho Pharmaceutical Corporation
    Raritan, N. J.
17. Parke, Davis & Company
    Detroit 32, Mich.
    C. O. Church, 223 Courtland St., N. E., Atlanta, Ga.
18. Everhart Surgical Supply Company
    499 Peachtree Street, N. E.
    Atlanta, Ga.
19. A. S. Aloe Company
    1831 Olive Street, St. Louis 3, Mo.
    W. W. Clary, Box 297, Vienna, Ga.
20. G. D. Searle & Company
    P. O. Box 5110, Chicago 80, Ill.
21. Surgical Selling Company
    139 Forrest Avenue, N. E., Atlanta, Ga.
22. E. R. Squibb & Sons
    Squibb Building, 745 Fifth Avenue,
    New York 22, N. Y.
32. General Electric X-Ray Corporation
    205 Spring Street, N. W., Atlanta, Ga.
24. Lullaby Diaper Service
    674 N. Highland Avenue, N. E., Atlanta, Ga.
25. The Wm. S. Merrell Company
    Lockland Station, Cincinnati 15, O.
26. The Coca-Cola Company
    P. O. Drawer 1734, Atlanta 1, Ga.
27. Charles C. Haskell & Company, Inc.
    223 East Main Street, Richmond 19, Va.
28. Lederle Laboratories Division
    American Cyanamid Company
    30 Rockefeller Plaza, New York 20, N. Y.
29. H. W. Kinney & Sons, Inc.
    Columbus, Ind.
30. Spencer Incorporated
    P. O. Box 1710, New Haven 7, Conn.

32. Estes Surgical Supply Company
56 Auburn Avenue, Atlanta, Ga.
33. Philip Morris & Co., Ltd., Inc.
119 Fifth Avenue, New York 3, N. Y.
34. Eli Lilly and Company
Indianapolis 6, Ind.
35. L. & B. Reiner
139 East 23rd Street, New York 10, N. Y.
36. Sharp & Dohme, Inc.
Philadelphia 1, Pa.
37. M & R Dietetic Laboratories, Inc.
Columbus 16, O.
38. Wachtel's Physician Supply Company
406-10 Bull Street, Savannah, Ga.
39. Doak Company, Inc.
2132 East 9th Street, Cleveland 15, O.
40. Ames Company, Inc.
Elkhart, Ind.
41. Schering Corporation
2 Broad Street, Bloomfield, N. J.
42. Holland-Rantos Company, Inc.
551 Fifth Avenue, New York 17, N. Y.
43. Pet Milk Sales Corporation
General Offices Arcade Building, St. Louis 1, Mo.
44. U. S. Vitamin Corporation
250 East 43rd Street, New York 17, N. Y.
45. Bilhuber-Knoll Corporation
Crane Street, Orange, N. J.
46. Hoffman-La Roche, Inc.
Roche Park, Nutley 10, N. J.
A. B. Ellerbee, Candler Building, Atlanta, Ga.
47. White Laboratories, Inc.
113 North 13th Street, Newark 7, N. J.
48. The Doho Chemical Corporation
58 Varick Street, New York 13, N. Y.
49. J. A. Majors Company
1301 Tulane Avenue, New Orleans 13, La.

## CONSTITUTION AND BY-LAWS OF THE MEDICAL ASSOCIATION OF GEORGIA

### Constitution

ARTICLE I.—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Medical Association of Georgia.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purposes of this Association shall be to federate and bring into one component organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component societies shall consist of those county societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

Section 1. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this Association shall be the members of the component county medical societies to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of the Association, and shall consist of: (1) delegates elected by the component county societies; (2) the officers of the Association enumerated in Section 1 of Article IX of the Constitution; (3) ex-presidents and delegates to the American Medical Association.

ARTICLE VI.—COUNCIL

The Council shall be the Board of Trustees and Finance Committee of the Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into session as provided in the Constitution and By-Laws.

It shall consist of the Councilors, the President, the President-Elect and the Secretary-Treasurer of the Association. Five of its members shall constitute a quorum.

ARTICLE VII.—SESSIONS AND MEETINGS

Section 1. The annual session shall take place on the second Wednesday in May at such place as shall be designated by the Association, provided that in case of conflict with the annual sesion of the American Medical Association or on petition of the county society of the host city made at least six months before the fixed dates for the annual session, the Council may change the dates by publishing a notice in the Journal of the Medical Association of Georgia three months before the session.

Sec. 2. Special meetings of either the Association or the House of Delegates may be called by a two-thirds vote of the Council, or upon the petition of twenty delegates.

ARTICLE VIII.—SECTIONS AND DISTRICT SOCIETIES

Section 1. The House of Delegates may provide for a division of the scientific work of the Associaton into appropriate sections, and for the organization of such Councilor district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE IX.—OFFICERS

Section 1. The officers of this Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and one Councilor for each congressional district in the State.

Sec. 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual meeting of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume his office as President immediately after the next annual meeting following his election. The terms of the Councilors shall be for three years, as may be arranged, viz: the Councilor for the first, second, third and fourth districts for three years: those for the fifth, sixth, seventh, and eighth districts for one year; those for the ninth and tenth districts for two years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed (1933).

Sec. 3. The officers of this Association shall be elected by ballot at 12 o'clock noon on the third day of the annual session. Nomination for office shall be made orally, but the nominating speech must not exceed two minutes. The Councilors shall be elected at the same time on nomination by their respective district societies at the annual meetings of such societies preceding the annual session of the Association at which the vacancies occur, but if no nomination from a district society is brought before the Association, the nomination for councilor may be presented from the floor. If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on the second ballot, the two names receiving the highest number of ballots shall be voted on until an election occurs. Delegates to the American Medical Association shall be elected at the same time and in the same manner.

Sec. 4. The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they may be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association.

### ARTICLE X.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of $10,00 per capita per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be approved by the Finance Committee before action is taken thereon.

### ARTICLE XI.—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

### ARTICLE XII.—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

### ARTICLE XIII.—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual session; and for its adoption at such session shall require a two-thirds vote of all present and voting.

## By-Laws

### CHAPTER I.—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Special membership. In addition to *Regular* members, component societies may elect to membership in their organizations, for membership in this Association, the following groups of members:

(a) *Honorary members.* Any member for old age, length of service, or other good reason, may be elected an honorary member of his county medical society, for membership in this Association. Such member shall, after election, be issued a certificate of honorary membership in this Association.

Non-resident physicians and resident or non-resident lay persons who have distinguished themselves in fields of endeavor devoted to the advancement of human welfare, may be nominated by county medical societies, or by the House of Delegates of this Association, for honorary membership in this Association. A county medical society shall not nominate for this class of membership more than one person each year. The name of such person shall be sent to the Secretary-Treasurer of this Association thirty days in advance of the annual session. Such person shall be issued an appropriate certificate of honorary membership in this Association if, and when, he is elected to honorary membership by this Association.

(b) *Associate members.* Eligible to this classification are (1) those regular members of component societies to whom the payment of dues would be an undue hardship; (2) interns, and (3) commissioned medical officers (see Chapter VII, Sec. 5 of these By-Laws) of the United States Army, the United States Navy and the United States Public Health Service while engaged actively in their respective services or if they have been retired on account of age or physical disability, or after long and honorable service, under the provisions of an Act of Congress.

(c) Honorary and Associate members shall not be subject to the payment of dues to the State Association. They shall enjoy the privilege of full participation in the scientific, social and educational activities of this Association. They shall not vote nor hold office and do not receive the JOURNAL or benefits of Medical Defense.

Sec. 5. Any physician applying for membership in a component medical society of this Association, who has previously practiced in a county in which affiliation with a component society is provided, and who moves to another county without having affiliated with the medical society in the jurisdiction of prevoius residence, before he is admitted to membership, the cause of his lack of affiliation in the society of his previous residence shall be ascertained.

### CHAPTER II.—GENERAL MEETINGS

Section 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. Visitors duly accredited to represent the associations of other states, or of the District of Columbia, not exceeding two in number for each organization, may attend upon, and participate in, the dis-

cussion of the general meeting, but shall not have a vote. Such delegates may read papers upon invitation of the Committee on Scientific Work. The general meetings shall be presided over by the President or by one of the Vice-Presidents.

Sec. 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Sec. 3. Entertainment. Any social entertainment which may be given by this Association shall be confined to the evening of the second day.

Sec. 4. Guests. Any physician not a resident of this State but a member of his state association, or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

## CHAPTER III.—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegates from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. Twenty delegates present shall constitute a quorum.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest of such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until, if possible, every physician in every county of the State has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized, and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and when the best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

## CHAPTER IV.—DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

In order to give him a better opportunity of becoming more fully acquainted with his duties and with the needs of the Association, the President shall be elected one year prior to taking office. During this time he shall be known as President-Elect and shall be ex-officio member of standing committees, and shall make recommendations at the next annual session.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Vice-Presidents, in their order, shall succeed him.

Sec. 3. The Secretary-Treasurer shall give bond in the sum of One Thousand Dollars. He shall demand and receive all funds due the Association, together with the bequests and donations.

Sec. 4. The Secretary-Treasurer shall attend the general meetings of the Association and the meetings of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members, delegates and accredited visitors at the annual session. He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and

shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the JOURNAL. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom, all moneys disbursed, to whom, and for what purpose, with vouchers attached. A fiscal year includes the period of time between the first day of May and the last day of April.

## CHAPTER V.—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates. It shall be the business body of the Association and attend to the business of the Association in the interim between meetings.

Sec. 2. Each Councilor shall be organizer and peacemake for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the conditions of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be considered to include his expense in attending the annual session of the Association. Each Councilor may appoint a Vice-Councilor to assist him in the performance of his duties in his district.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to the members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of a component society, on which an appeal is taken from the decision of an individual Councilor, or to which attention has been called by the Councilor or interested members. It shall hear and decide all questions affecting unethical conduct on the part of any member of any annual session, and its decision in all such matters shall be final when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and the societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the JOURNAL.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary-Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA for publication. The editor, with the consent of the Councilor for the district in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may consider not suitable for publication.

Sec. 7. All commercial exhibits during the annual sessions shall be within the control and direction of the Council.

Sec. 8. In the absence of a Councilor and Vice-Councilor the President is empowered to appoint a representative from the district as acting Councilor, who shall have full rights and powers of a Councilor.

Sec. 9. Each Councilor shall render at every session a written report of each county in his district.

Sec. 10. Any member of the Council who fails to attend two regular successive sessions of the Council, or whose district does not show evidence of the performanace of his duties during the year, unless he renders an acceptable excuse to the Council, is subject to have his position declared vacant by the President and a successor appointed by the President.

## CHAPTER VI.—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements.

A Committee on Medical Defense, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of four members, one of whom shall be the Secretary-Treasurer. The other three members shall be appointed for terms of one, two, and three years, respectively. The vacancy which will occur each year by the expiration of the term of one member shall be filled by the President with an appointment of three years. The member who has the shortest time to serve shall be chairman. The committee shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary, the Commissioner of Health of the State of Georgia, and a sub-committee of three members from each Councilor District appointed by the chairman when needed. It shall represent the Association in securing and enforcing legislation in the interests of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professoinal influence so as to promote the general good of the community in local and national affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates and their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Committee on Medical Defense shall consist of five members, of whom the Chairman of the Council and the Secretary-Treasurer of the Association shall be members. The other members, one of whom shall act as chairman of the committee, shall be elected by the Council for a period of five years. Those elected at this meeting (April 19, 1916), shall serve one, three and five years, respectively.

It shall he the duty of the Committee on Medical Defense to investigate and defend all damage suits against the Medical Association of Georgia; to investigate all claims of civil malpractice made against its members, to take full charge of such cases, which after investigation they decide to be proper cases for defense; to defend all such cases in the courts of last resort, to furnish General Counsel and pay court cost usual to such litigation, and reasonable fees for local attorneys as shall be arranged by General Counsel. Provided that any member who has indemnity insurance shall have such insurance bear its portion of the expense. However, they shall not pay, or obligate the Medical Association of Georgia to pay any judgment rendered against any member upon the final determination of any case. They shall be empowered to contract with such agents or attorneys as they may deem necessary for the proper carrying out of this By-Law.

The assistance for defense, as herein provided, shall be available only to members of the Medical Association of Georgia in good standing. Any member who has not paid his annual dues by April 1st shall not be considered in good standing in the application of this By-Law.

Any member or members of the Association threatened with suit for civil malpractice shall immediately communicate with the Secretary of the Association and shall give full and complete information in reference to all the circumstances alleged in the complaint. The Secretary shall proceed immediately to investigate the circumstances reported and shall advise with the attorneys or agents employed by the committee for this purpose. The members sued, or threatened with suit, shall be consulted and shall have the complete confidence of the committee in all transactions connected with the investigation in question. The committee shall have the authority to require of a constituent society or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the committee so appointed to report to the Committee on Medical Defense and not to the society from which it was appointed.

The Committee on Medical Defense may also, at its discretion, arrange to prosecute illegal practitioners in the State of Georgia and assist in the enforcement of the Medical Practice Act of this State.

## CHAPTER VII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Physicians who have been legally registered in other states or who have been licensed by the National Board of Medical Examiners, or who are employed as

teachers in the medical schools, or are in the service of the State, a county, a municipality, or the United States Government other than the regular medical corps of the United States Army, the United States Navy and the United States Public Health Service, may be accepted for membership in county medical societies, for membership in this Association, provided they meet the requirements of regular membership. Before a charter is issued to any county medical society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. No matter what the unethical conduct or discipline of the members of the county society may be, both plaintiff and defendant shall have the right to appeal to the Council, whose decision shall be final when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component county society moves to another county in this State, he shall be given a wrritten certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the county to which he moves. Pending his acceptance or rejection by the society in the county to which he moves, such member shall be considered to be in good standing in the county society from which he was certified and in the Medical Association of Georgia to the end of the period for which his dues have been paid.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Association each year thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment, or make the report required on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

## CHAPTER VIII.—RULES AND ETHICS

Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Sec. 3. The principles of medical ethics of the American Medical Association shall be those of this Association.

Sec. 4. Any member of this Association, on locating in a new place for practicing his profession, may place his professional card, containing name, address, telephone number, and statement as to whether or not his practice will be limited to any particular class of diseases, in the local paper for a period of not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper, telephone directory, or other public places, shall be considered unethical.

## CHAPTER IX.—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association after the amendment has lain on the table for one day.

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## RESOLUTIONS, MEDICAL ASSOCIATION OF GEORGIA

### 1921

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper, shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

### 1922

Be it Resolved, That the House of Delegates recommend that the Committee on Scientific Work make

available on the program of the State Association space for two papers from each Council district; that a definite time be assigned for reading and discussion of each of these papers, and they be given precedence over all other business. The said papers are to be selected by the Committee on Scientific Work, and, in case a writer does not respond when his name is called, some paper will be substituted and the schedule not deranged. The President ruled that this resolution is only a recommendation and not a law.

1928

Resolved, That the delegates to the A. M. A. elected at this and succeeding meetings of the Medical Association of Georgia be installed January 1st, following their election, and that their term of service run for two years thereafter. And be it further

Resolved, That our delegates be authorized to attend the regular and any called meeting of the House of Delegates of the American Medical Association during the term to which they are elected.

1929

Resolved, That in order to expedite the business of the House of Delegates, all reports of special and regular committees of the Association involving matters of public policy, legislation or appropriation of the funds of the Association be submitted in writing to the Secretary of the Association a sufficient time in advance of the regular annual session, about March 15th, to permit the publication of said recommendations either in the official program prior to the session, or in a special circular that shall be mailed to the constituent societies, in order that the delegates may be advised of the proposed changes.

1947

Resolved, That the House of Delegates set the amount of dues at $10.00 per capita for the year 1948.

## NUTRITION SERVICES IN GEORGIA

(Continued from Page 94)

All nutrition work is carried on through local health departments. The work of the State and regional nutritionists is chiefly consultative, although a limited amount of direct service is given.

Many types of nutrition education work are carried on. Much of this is staff training for other health department personnel so that more people may be reached with nutrition information. Work is done also with teachers, elementary, high school and college students and with medical and nursing students. Midwives are trained in good prenatal and postnatal diets so they can give correct information to the women they serve.

Food demonstrations are being given in many counties. These demonstrations are on the preparation of simple, inexpensive foods, and the audiences consist chiefly of pregnant women and mothers of young children. Simple nutrition information is given as part of the demonstration.

When direct service is given it is to those attending prenatal clinics, child health conferences, tuberculosis clinics, crippled children's clinics and occasional home visits. Much of this work is done as a method of staff education.

The nutritionists assist health workers and families in planning food budgets for those on limited incomes. Newspaper articles, radio broadcasts, pamphlets, exhibits and other material are prepared for public education.

The nutritionists work with other agencies and organizations in trying to improve the nutritional status of the people in Georgia. It is believed that this will result in a healthier population with greater mental alertness and with improved economic conditions.

Myra Reagan, B.A., M.S.
*Nutrition Consultant,*
Division of Maternal and Child Health,
Georgia Department of Public Health.

## RECOMMEND LARGER PENICILLIN DOSAGE TO PREVENT INFECTION

*Study Of Children With Rheumatic Fever Who Received Penicillin Shows Germs Acquire Unexpected Resistance*

To prevent infections of the throat, nose and tonsils and consequent recurrences of rheumatic fever, larger oral doses of penicillin should be given than have usually been recommended for rheumatic fever patients, say three writers in the February 21 issue of *The Journal of the American Medical Association.*

The writers are Albert Milzer, Ph.D., Kate H. Kohn, M.D., and Helen MacLean, A.B., Chicago, from the Department of Bacteriology and Cardiovascular Research, Medical Research Institute of the Michael Reese Hospital.

The penicillin is given for prevention or treatment of hemolytic streptococcus infections, which start in the upper respiratory tract and destroy red blood cells so that the patient rapidly becomes anemic. Such infections play a part in the development or recurrence of rheumatic fever.

The study reported by the writers involved 114 children with rheumatic fever, all attending the same special school for children with rheumatic heart disease. Over a period of at least five months, 64 of these children received an oral dose of 50,000 units of penicillin twice daily. The remaining 50 children received no penicillin but were in constant daily contact with the others. After the test group had received penicillin daily for at least four months, throat cultures were made from all 114 children.

Strains of beta hemolytic streptococci isolated in the throat cultures of 87 per cent of the group receiving penicillin were found to have become at least 16 times more resistant to penicillin than is true in routine tests of sensitivity to the drug prior to treatment.

Forty per cent of beta hemolytic streptococci from the group which did not receive penicillin were also significantly resistant to the drug. The writers explain this by the frequent opportunity for cross infection between the two groups, since they were in constant contact for at least four months before the throat cultures were made.

"Because our results show the development of significant resistance of beta hemolytic streptococci to penicillin, additional experiments are being planned in which larger oral doses of penicillin will be given daily for prophylaxis against recurrence of rheumatic fever," the writers state.

## SAY INFLUENZAL MENINGITIS IS TREATED BETTER WITHOUT SPINAL PUNCTURE

Recovery from influenzal meningitis is more prompt and complications are fewer when treatment by spinal puncture is omitted, according to two doctors in the February 28 issue of *The Journal of the American Medical Association.*

The writers are Archibald L. Hoyne, M.D., and Rowine Hayes Brown, M.D., from the Municipal Contagious Disease and Cook County Disease Hospitals, Chicago.

Influenzal meningitis is a type of inflammation of the three membranes which envelop the brain and spinal cord. It is caused by an influenzal virus, but its symptoms resemble those of other types of bacterial meningitis.

Rare in adults, the disease was formerly almost universally fatal. The sulfonamide compounds, specific anti-influenzal serum and streptomycin have all made the picture more optimistic, but even today there is no standard accepted for their application. Many doctors still believe that numerous spinal taps for drainage are necessary even after diagnosis has been established by spinal tap. Furthermore, when the National Research Council released streptomycin for treatment it advised that the new antibiotic be injected by spinal puncture.

The Chicago doctors' conclusion is based on a dozen years of experience in the treatment of meningitis. In their article they report specifically on 14 consecutive patients with influenzal meningitis treated at the County hospital in 1946 and 1947 and 16 consecutive patients treated at the Municipal hospital in 1946. There was only one death in each group, and in both of the fatal cases the patients had been given streptomycin by spinal puncture as well as intramuscularly. On the other hand, 23 of the 28 patients who recovered had received no treatment by spinal puncture after diagnosis. These 23 had been given streptomycin intramuscularly, had been treated with serum, or had received sulfonamide compounds—sometimes all three.

"The primary purpose of a lumbar puncture should be to established a diagnosis," Dr. Hoyne and Dr. Brown conclude.

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## COUNTIES REPORTING FOR 1948

***Blue Ridge Medical Society***
President—James F. O'Daniel, Ellijay
Vice-President—John Y. O'Daniel, Ellijay
Secretary-Treasurer—Albert L. Morris, Young Harris
Delegate—James M. Burdine, Blue Ridge
Alternate Delegate—Albert L. Morris, Young Harris

***Carroll-Douglas-Haralson Medical Society***
President—D. S. Reese, Carrollton
Vice-President—R. E. Hamilton, Douglasville
Secretary-Treasurer—Wm. P. Downey, Tallapoosa
Delegate—S. F. Scales, Carrollton
Alternate Delegate—C. H. Allen, Bremen

***Cherokee-Pickens Medical Society***
President—C. J. Roper, Jasper
Vice-President—John T. Pettit, Canton
Secretary-Treasurer—Robert T. Jones, III, Canton
Delegate—Arthur M. Hendrix, Ball Ground
Alternate Delegate—E. A. Roper, Jasper
Censors: George C. Brooke, Charles R. Andrews, Jr., and E. A. Roper.

***Clarke County Medical Society***
President—W. H. Cabaniss, Athens
Vice-President—J. B. Neighbors, Jr., Athens
Secretary-Treasurer—G. H. Byrd, Athens
Delegate—James A. Green, Jr., Athens
Alternate Delegate—H. B. Harris, Athens

***Clayton-Fayette Medical Society***
President—J. R. Wallis, Lovejoy
Vice-President—J. L. Robak, Jonesboro
Secretary-Treasurer—T. J. Busey, Fayetteville
Delegate—Y. R. Coleman, Jonesboro

***Decatur-Seminole Medical Society***
President—George L. Epps, Bainbridge
Vice-President—James W. Polk, Donalsonville
Secretary-Treasurer—M. A. Ehrlich, Bainbridge
Delegate—R. F. Wheat, Bainbridge
Alternate Delegates—Carl B. Welch, Attapulgus

***Dooly County Medical Society***
President—V. C. Daves, Vienna
Secretary-Treasurer—Martin L. Malloy, Vienna
Delegate—O. W. Kitchens, Byromville

***Franklin County Medical Society***
President—Stewart D. Brown, Royston
Secretary-Treasurer—E. T. Poole, Lavonia
Delegate—R. E. Ridgway, Royston

***Henry County Medical Society***
President—A. W. Carter, Jr., McDonough
Vice-President—R. V. Brandon, McDonough
Secretary-Treasurer—H. C. Ellis, McDonough
Delegate—Gordon R. Foster, Jr., McDonough

***Jasper County Medical Society***
President—F. S. Belcher, Monticello
Vice-President—Albert Fisher, Jr., Monticello
Secretary-Treasurer—E. M. Lancaster, Shady Dale
Delegate—F. S. Belcher, Monticello

***Jefferson County Medical Society***
President—C. Roy Williams, Wadley
Vice-President—Walter J. Revell, Louisville
Secretary-Treasurer—James W. Pilcher, Louisville
Delegate—C. Roy Williams, Wadley
Alternate Delegate—James W. Pilcher, Louisville

***South Georgia Medical Society***
Berrien, Clinch, Cook, Echols, Lanier and Lowndes Counties
President—Fred N. Clements, Adel
Vice-President—C. W. Ketchum, Valdosta
Secretary-Treasurer—E. Harry Mixson, Valdosta
Delegate—A. G. Little, Jr., Valdosta
Alternate Delegate—J. F. Mixson, Jr., Valdosta
Censor: Frank H. Thomas Valdosta

***Meriwether-Harris Medical Society***
President—J. A. Johnson, Jr., Manchester
Vice-President—Robert L. Bennett, Warm Springs
Secretary-Treasurer—R. B. Gilbert, Greenville
Delegate—J. A. Johnson, Jr., Manchester
Alternate Delegate—C. E. Irwin, Warm Springs

***Ocmulgee Medical Society***
Bleckley-Dodge-Pulaski Counties
President—Edward G. Jones, Eastman
Vice-President—Frank P. Holder, Jr., Eastman
Secretary-Treasurer—James L. Thomson, Eastman

***Spalding County Medical Society***
President—A. H. Frye, Jr., Griffin
Vice-President—J. T. Giles, Griffin
Secretary-Treasurer—Alex P. Jones, Griffin
Delegate—H. J. Copeland, Griffin
Alternate Delegate—T. O. Vinson, Griffin
Censors: G. L. Walker and J. T. Giles

***Taylor County Medical Society***
President—F. H. Sams, Reynolds
Vice-President—Lewis Beason, Butler
Secretary-Treasurer—R. C. Montgomery, Butler
Delegate—R. C. Montgomery, Butler

***Thomas County Medical Society***
President—Frank A. Little, Thomasville
Vice-President—Joe I. Palmer, Thomasville
Secretary-Treasurer—Kirk Shepard, Thomasville
Delegate—Mervin B. Wine, Thomasville
Alternate Delegate—Kirk Shepard, Thomasville
Censors: C. H. Watt, Henry M. Moore, and John W. Mobley, Jr.

***Wilkes County Medical Society***
President—C. E. Wills, Washington
Vice-President—A. W. Simpson, Jr., Washington
Secretary-Treasurer—M. C. Adair, Washington
Delegate—M. C. Adair, Washington
Censors: A. W. Simpson, Sr., and L. R. Casteel

# WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA



MRS. W. G. ELLIOTT
Cuthbert
President, 1947-1948

## INVITATIONS

### WOMAN'S AUXILIARY TO THE FULTON COUNTY MEDICAL SOCIETY

To the Members of the Woman's Auxiliary to the Medical Association of Georgia:

The Woman's Auxiliary to the Fulton County Medical Society cordially invites the wives of all the doctors of the Medical Association of Georgia to attend the annual convention April 27-30, 1948, in Atlanta. Mrs. W. G. Elliott, the president, is planning a stimulating program. To us it is an occasion of great joy, this coming together to study the health problems of our State and to mingle together in friendly fellowship. Come and let us make this a good year for Georgia.

Mrs. M. T. Edgerton, *President,*
Woman's Auxiliary to the Fulton
County Medical Society.

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### WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

Dear Auxiliary Members:

The Twenty-third Convention of the Woman's Auxiliary to the Medical Association of Georgia will meet in Atlanta April 27-30. May I extend a most cordial invitation to every Auxiliary member and to every doctor's wife in Georgia to attend this convention.

I feel sure that every effort possible will be made by our hostesses, the Auxiliary to the Fulton County Medical Society, to make our visit pleasant.

I am looking forward with much pleasure to seeing each of you. Let's make it the best session in its history.

Sincerely,
Mrs. W. G. Elliott, *President,*
Woman's Auxiliary to the
Medical Association of Georgia.

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PROGRAM
TWENTY-THIRD ANNUAL CONVENTION
WOMAN'S AUXILIARY
to the
MEDICAL ASSOCIATION OF GEORGIA
ATLANTA
April 27-30, 1948

Officers and Committees

*Executive Board*

President—Mrs. W. G. Elliott, Cuthbert.
President-Elect—Mrs. Sam Anderson, Milledgeville.
First Vice-President—Mrs. Shelley C. Davis, Atlanta.
Second Vice-President—Mrs. W. D. Hall, Calhoun.
Third Vice-President—Mrs. Robert Crichton, Milledgeville.
Recording Secretary—Mrs. Harry M. Kandel, Savannah.
Corresponding Secretary—Mrs. J. C. Patterson, Cuthbert.
Treasurer—Mrs. R. C. McGahee, Augusta.
Historian—Mrs. J. E. Billings, Calhoun.
Parliamentarian—Mrs Ralph Chaney, Augusta.
Press and Publicity—Mrs. Jeff L. Richardson, Atlanta.

*Chairmen of Standing Committees*

Archives—Mrs. Eustace A. Allen, Atlanta.
Revisions—Mrs. Lee Howard, Savannah.
Mrs. J. Bonar White Exhibit and Scrapbook Awards—Mrs. A. W. DeLoach, Waycross.
Mrs. James N. Brawner Trophy—Mrs. Bruce Schaefer, Toccoa.
Bulletin—Mrs. W. L. Curtis, College Park.
Achievement Award—Mrs. W. E. Matthews, Augusta.
Public Relations—Mrs. Dewey Nabors, Atlanta.
Visual Education—Mrs. C. S. Pittman, Jr., Tifton.
Legislation—Mrs. John Elliott, Savannah.
Research and Romance of Medicine—Mrs. J. L. Gallemore, Perry.
Doctors' Day—Mrs. Charles Cooper, Macon.
Postwar Planning—Mrs. L. W. Williams, Savannah.
Student Loan Fund—Mrs. J. Lon King, Macon.

District Managers

First District—Mrs. W. E. Simmons, Metter.
Second District—Mrs. C. S. Pittman, Jr., Tifton.
Third District—Mrs. Schley Gatewood, Americus.
Fifth District—Mrs. B. L. Shackleford, Atlanta.
Sixth District—Mrs. Fred Rawlings, Sandersville.
Seventh District—Mrs. Wilbur Hall, Calhoun.
Eighth District—Mrs. Sage Harper, Douglas.
Ninth District—Mrs. Robert Jones, III, Canton.

Presidents of County Auxiliaries

Baldwin County—Mrs. E. W. Allen, Milledgeville.
Barrow County—Mrs. William T. Randolph, Winder.
Bibb County—Mrs. J. R. Shannon Mays, Macon.
Bulloch-Chandler-Evans Counties—Mrs. J. L. Nevil, Metter.
Burke-Jenkins-Screven Counties—Mrs. Cleveland Thompson, Millen.

Chatham County—Mrs. T. A. Peterson, Savannah.
Cherokee-Pickens Counties—Mrs. Charles Andrews, Canton.
Cobb County—Mrs. Murl Haygood, Marietta.
Colquitt County—Mrs. Cecil Brannen, Moultrie.
Carroll-Douglas-Haralson Counties—Mrs. D. S. Reese, Carrollton.
Dougherty County—Mrs. P. L. Hilsman, Albany.
DeKalb County—Mrs. T. E. McGeachy, Decatur.
Dodge-Pulaski-Bleckley Counties—Mrs. Albert Bush, Hawkinsville.
Floyd County—Mrs. Lee Battle, Rome.
Fulton County—Mrs. M. T. Edgerton, Atlanta.
Gordon County—Mrs. R. D. Walter, Calhoun.
Glynn County—Mrs. Haywood Moore, Brunswick.
Gwinnett County—Mrs. Thomas L. Parker, Duluth.
Habersham County—Mrs. J. B. Jackson, Clarkesville.
Muscogee County—Mrs. Luther H. Wolfe, Columbus.
Peach-Houston Counties—Mrs. J. L. Gallemore, Perry.
Randolph-Terrell Counties—Mrs. Robert Martin, III, Cuthbert.
Richmond County—Mrs. W. J. Williams, Augusta.
Sumter County—Mrs. Henry Fenn, Americus.
Stephens County—Mrs. C. L. Ayers, Toccoa.
Tift County—Mrs. R. K. Winston, Tifton.
Ware County—Mrs. J. L. Gay, Waycross.
Washington County—Mrs. J. B. Dillard, Davisboro.
Whitfield County—Mrs. Fred Ragland, Dalton.

## PAST PRESIDENTS AND CONVENTIONS

Honorary President for Life—Mrs. James N. Brawner. Atlanta.
1924—Augusta—(Organization)—Mrs. C. W. Roberts, Atlanta, Temporary Chairman.
1925—Atlanta—Mrs. James N. Brawner, Atlanta.
1926—Albany—Mrs. William H. Myers, Savannah.
1927—Athens—Mrs. C. W. Roberts, Atlanta.
1928—Savannah—Mrs. Paul Holliday, Athens. (Mrs. J. C. Moore, Gaffney, S. C.)
1929—Macon—Mrs. Charles C. Hinton, Macon.
1930—Augusta—Mrs. Marion T. Benson, Atlanta.
1931—Macon—Mrs. Charles C. Harrold, Macon.
1932—Savannah—Mrs. Ralston Lattimore, Savannah.
1933—Macon—Mrs. S. T. R. Revell, Louisville.
1934—Augusta—*Mrs. J. Bonar White, Atlanta.
1935—Atlanta—Mrs. J. E. Penland, Waycross.
1936—Savannah—Mrs. Ernest R. Harris, Winder.
1937—Macon—Mrs. William R. Dancy, Savannah.
1938—Augusta—Mrs. Ralph Chaney, Augusta.
1939—Atlanta—Mrs. Warren A. Coleman, Eastman.
1940—Savannah—Mrs. Eustace A. Allen, Atlanta.
1941—Macon—Mrs. H. G. Banister, Ila.
1942—Augusta—Mrs. Lee Howard, Savannah.
1943—Atlanta—Mrs. J. Lon King, Macon.
1944—Savannah—Mrs. Olin S. Cofer, Atlanta.
1946—Macon—Mrs. W. T. Randolph, Winder.
1947—Augusta—Mrs Bruce Schaefer, Toccoa.

* Deceased.

## FULTON COUNTY MEDICAL SOCIETY WOMAN'S AUXILIARY CONVENTION COMMITTEES

*All of Atlanta*

MRS. M. T. EDGERTON, *President and General Chairman*
MRS. JEFF RICHARDSON, *Co-chairman*

*Advisory*

Mrs. Jeff Richardson — Mrs. Hal Davison
Mrs. John Turner — Mrs. Ed Greene
Mrs. Olin Cofer — Mrs. Allen Bunce
Mrs B. L. Shackleford — Mrs. D. R. Longino
Mrs. Kels Boland — Mrs. Harold McDonald

*Registration and Credentials*

Mrs. Allen Bunce, *Chairman* — Mrs. Max Blumberg, Mrs. Emory Lower
Mrs. D. R. Longino, *Co-chairman* — Mrs. Ross Brown, Mrs. W. B. Duvall
Mrs. William Mitchell — Mrs. M. C. Pruitt
Mrs. Bruce Logue — Mrs. R. E. McClure
Mrs. J. D Manget, Jr. — Mrs. T. Boling Gay
Mrs. S. L. Morris

*Decorations*

Mrs. H. Walker Jernigan, *Chairman* — Mrs. Fred Hodges, Mrs. Chas. Rieser
Mrs. Dewey Nabors, *Co-chairman* — Mrs. D. O. Thompson, Mrs. H. C. Sauls
Mrs. W. W. Anderson — Mrs. William Dunn
Mrs. J. H. Dew — Mrs. Dan Sage
Mrs. Don Cathcart — Mrs. Lee Bivings
Mrs. Herschel Crawford — Mrs. J. E. Scarborough
Mrs. Martin Myers — Mrs. Calvin Stewart
Mrs. Dixon Fowler

*Luncheon and Style-Show*

Mrs. John Turner, *Chairman* — Mrs. George Fuller, Mrs. T. L. Tidmore
Mrs. T. C. Davison, *Co-chairman* — Mrs. George Wagnon, Mrs. Mark Pentecost
Mrs. O. H. Matthews — Mrs. J. A. Combs
Mrs. John Funke — Mrs. Olin Cofer
Mrs. A. H. Letton

*Garden Tour*

Mrs. Hal Davison, *Chairman* — Mrs. John Atwater, Mrs. Raymond Arp
Mrs. Ed Greene, *Co-chairman* — Mrs. Herbert Alden, Mrs. William Dobes
Mrs. W. W. Anderson — Mrs. Phinizy Calhoun
Mrs. Chas. Dowman — Mrs. Cosby Swanson
Mrs. A. H. Letton — Mrs. Howard Hailey

*Transportation*

Mrs. Harold P. McDonald, *Chairman* — Mrs. John Cross, Mrs. T. P. Goodwin
Mrs. Murdock Equen, *Co-chairman* — Mrs. M. T. Harrison, Mrs. W. A. Kelley
Mrs. Hewlett Askew — Mrs. J. Harry Lange
Mrs. Steve Brown — Mrs. A. O. Linch
Mrs. James H. Byram — Mrs. Jack Norris

*Tea at the Piedmont Driving Club*

Mrs. Kels Boland, *Chairman* — Mrs. Henry Poer, Mrs. William Armstrong
Mrs. B. L. Shackleford, *Co-chairman* — Mrs. Steve Barnett, Mrs. Harry Lange
Mrs. Harry Rogers — Mrs. Chas. Jones
Mrs. Joe Boland — Mrs. Hugh Hailey
Mrs. Duncan Shepard — Mrs. A. O. Linch
Mrs. Dewey Nabors — Mrs. Marion Benson, Jr.
Mrs. H. Walker Jernigan — Mrs. Phinizy Calhoun, Jr.
Mrs. Wadley Glenn — Mrs. William Warren

*Timekeepers*

Mrs. Harry Rogers — Mrs. Walker Curtis

*Memorial Service*

Mrs. Shelley Davis, *Chairman* — Mrs. A. M. Collinsworth, Mrs. C. M. West
Mrs. Luther Byrd, *Co-chairman*

*Pages*

Mrs. August Turner, *Chairman* — Mrs. Thos. Matthews, Mrs. Reese Coleman
Mrs. W. J. Pendergrast, *Co-chairman* — Mrs. Robert Huie, Mrs. Ralph Smith
Mrs. Chas. Howard

*Courtesy*

Mrs. Steve Brown, *Chairman* — Mrs. T. P. Goodwyn, Mrs. Hewlett Askew
Mrs. Frank Boland, *Co-chairman* — Mrs. Ross Brown, Mrs. W. P. Sloan

*Telephone*

Mrs. Scott Tarplee, *Chairman* — Mrs. R. H. Hancock, Mrs. John Maulding
Mrs. George Klugh, *Co-chairman* — Mrs. Fred Rudder, Mrs. Robert Whipple
Mrs. John Atwater — Mrs. Exum Walker
Mrs. Reese Coleman — Mrs. Marvin Mitchell
Mrs. Emory Lower — Mrs. Martin Myers
Mrs. R. E. McClure — Mrs. Homer Maulding
Mrs. Sterling Claiborne — Mrs. Linus Miller

*Exhibits and Scrapbooks*

Mrs. Ben H. Clifton, *Chairman*
Mrs. Charles McLoughlin, *Co-chairman*
Mrs. Maxwell Berry
Mrs. O. B. Bush
Mrs. Olin Cofer
Mrs. W. W. Daniel
Mrs. L. N. Turk
Mrs. John W. Ashford

*Publicity*

Mrs. Clifton Kemper, *Chairman*
Mrs. Jeff Richardson, *Co-chairman*
Mrs. J. Harry Lange, *Co-chairman*

*Hospitality*

For Tuesday

Mrs. John Akin, *Chairman*
Mrs. E. M. Dunstan, *Co-chairman*
Mrs. Osler Abbott
Mrs. Albert Evans
Mrs. P. L. Collinsworth
Mrs. Donald Beard
Mrs. Needham Bateman
Mrs. C. C. Aven
Mrs. L. C. Baggett
Mrs. Evert A. Bancker
Mrs. Bernard Wolff
Mrs. Spalding Schroder
Mrs. B. T. Beasley
Mrs. Warren Matthews
Mrs. L. P. Daly
Mrs. Linton Smith
Mrs. Buford O'Neal
Mrs. George Hess
Mrs. T. F. Davenport
Mrs. O. T. Malone
Mrs. Chas. Daniels
Mrs. Guy Hewell
Mrs. Joe Massee
Mrs. C. A. Rhodes
Mrs. Henry Steadman
Mrs. L. J. Miller
Mrs. Luther Baker
Mrs. C. H. Pinson
Mrs. Philip Nippert
Mrs E. B. Agnor
Mrs. John Jacobs
Mrs. Sterling Claiborne
Mrs. McClaren Johnson
Mrs Hiram Kite
Mrs Peter Hydrick

For Wednesday

Mrs. George Williams, *Chairman*
Mrs. Walker Curtis *Co-chairman*
Mrs. Guy Lunsford
Mrs. Chas. G. Boland
Mrs. Robert Anderson
Mrs. J. F. Arthur
Mrs. Taylor Burgess
Mrs. John D. Campbell
Mrs Edgar Fincher
Mrs. Kimsey Foster
Mrs. Spencer Kirkland
Mrs. William Kiser
Mrs. J. G. McDaniel
Mrs. W. O. Martin
Mrs. M. M. Neel
Mrs. S. J. Sinkoe
Mrs. J. A. Weinberg
Mrs. Joseph Yampolsky
Mrs. W. Earl Quillian
Mrs. J. D. Nall
Mrs. E. L. Askren, Jr.
Mrs. Robert Gilliam
Mrs. Claud Griffin
Mrs. D. T. Heyser
Mrs. R. T. Camp
Mrs. Tully Blalock
Mrs. Samuel Greene
Mrs. Lamont Henry
Mrs. W. S. Dorough
Mrs. Isidore Cohen
Mrs. William Coppedge
Mrs. J. Frank Harris
Mrs. Alvin D. Josephs
Mrs. Jack Landham
Mrs. H. M. S. Adams
Mrs. Farish Holden
Mrs. J. R. Childs

For Thursday

Mrs Ben Read, *Chairman*
Mrs. Joseph Read, *Co-chairman*
Mrs. Robert Candler
Mrs. Gregory Bateman
Mrs. Ben Read,
Mrs. W. W. Blackman
Mrs. Belford C. Blaine
Mrs. Edgar Boling
Mrs. Virgil Cooke
Mrs. John F. Denton
Mrs. Walter Earle
Mrs. C. S. Glisson
Mrs. Miller Harrison
Mrs. Lamont Henry
Mrs. Sterling Jernigan
Mrs. Roy S. Leadingham
Mrs. Merrell Lineback
Mrs. John R. McCain
Mrs. Lewis H. McDonald
Mrs. James J. Martin
Mrs. Henry Minor
Mrs. Herbert Rosenberg
Mrs. J. M. Monfort
Mrs. R. L. Robinson
Mrs. L. C. Rouglin
Mrs. A. S. Sanders
Mrs. Joseph Skobba
Mrs. John W. Thompson
Mrs. W. A. Smith
Mrs. A. H. VanDyke
Mrs. Paul Vella
Mrs. James L. Pittman
Mrs. Julius Pierotti
Mrs. J. A. Weinberg
Mrs. Homer Swanson
Mrs. Samuel Stampa
Mrs. Walter Sheldon

## PROGRAM
## HEADQUARTERS, ACADEMY OF MEDICINE

*Registration*

Tuesday, April 27—2:00 to 6:00 P. M.
Wednesday, April 28—9:00 A.M. to 6:00 P. M.
Thursday, April 29—9:00 A.M. to 12:00 Noon.

PROGRAM AND ENTERTAINMENT

Tuesday, April 27, 3:30 P. M.—Executive Board Meeting.

Wednesday, April 28—General meeting 10:00 A.M. to 12:30 P. M.

Wednesday, April 28, 1:00 P. M.—Luncheon and Style Show at Brookhaven Country Club, honoring Mrs. Olin Cofer, president of Woman's Auxiliary to the Southern Medical Association, Mrs. W. G. Elliott, president of Woman's Auxiliary to the Medical Association of Georgia, and Mrs. Sam Anderson, president-elect of the Woman's Auxiliary to the Medical Association of Georgia.

Wednesday, April 28, 6:30 P. M.—Dinner Biltmore Hotel. All doctors wives invited.

Wednesday, April 28, 8:00 P. M.—Public meeting of the Medical Association of Georgia.

Thursday, April 29, General meeting, 10:00 A. M. to 12:30 P. M.

Thursday, April 29, 2:00 P. M.—Garden tour to be followed by tea at the Piedmont Driving Club, honoring Mrs. Eustace Allen, president of the Woman's Auxiliary to the American Medical Association, Mrs. Olin Cofer, president of the Woman's Auxiliary to the Southern Medical Association, Mrs. W. G. Elliott, president of the Woman's Auxiliary to the Medical Association of Georgia, and Mrs. Sam Anderson, president-elect of the Woman's Auxiliary to the Medical Association of Georgia.

Thursday, April 29—Post-convention Board Meeting.

Thursday, April 29, 7:30 P. M.—Joint banquet, Biltmore Hotel.

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## GENERAL MEETING
Academy of Medicine
Wednesday, April 28, 10:00 A. M.
PROGRAM

Call to Order by the President, Mrs. W. G. Elliott, Cuthbert

*Invocation*

Mrs. James N. Brawner, Atlanta, Honorary President for Life of the Woman's Auxiliary to the Medical Association of Georgia.

*Pledge of Loyalty to the Woman's Auxiliary to the Medical Association of Georgia*

Mrs. J. R. Shannon Mays, Macon

*Address of Welcome*

Mrs. M. T. Edgerton, Atlanta, President of the Woman's Auxiliary to the Fulton County Medical Society

*Response to Address of Welcome*

Mrs. B. E. Collins, Waycross

*Introduction of Officers and Distinguished Guests*

Mrs. Edgar H. Greene, Atlanta

*Address*

Mrs. Eustace A. Allen, Atlanta, President of the Woman's Auxiliary to the American Medical Association.

*Address*

Dr. Steve P. Kenyon, Dawson, President of the Medical Association of Georgia

*Address*

Dr. Edgar H. Greene, Atlanta, President-Elect of the Medical Association of Georgia

*Rules Governing Convention Procedure*

Mrs. Ralph Chaney, Augusta, Parliamentarian

*Introduction of Pages*

Mrs. August Turner, Atlanta

*Report of Executive Committee*

Chairman elected at pre-convention Executive Board Meeting

*Report of Entertainment Committee*

Mrs. Jeff Richardson, Atlanta

*Reports of District Managers*

*Reports of County Presidents*

*Report of Registration Committee*

Mrs. Allen H. Bunce, Atlanta

*Business*

*Reading of Minutes*

*Adjournment*

## GENERAL MEETING
## ACADEMY OF MEDICINE

Thursday, April 29, 10:00 A. M.

Call to Order by the President, Mrs. W. G. Elliott, Cuthbert

*Report of Advisory Committee to the Woman's Auxiliary to the Medical Association of Georgia*
Dr. J. A. Redfearn, Albany, Chairman

*Address*
Mrs. Olin S. Cofer, Atlanta, President of the Woman's Auxiliary to the Southern Medical Association

*Memorial Service*
Mrs. Shelley Davis, Atlanta
Soloist: Mrs. T. Luther Byrd, Atlanta

*Report of Meeting of the Woman's Auxiliary to the American Medical Association*
Mrs. Bruce Schaefer, Toccoa

*Report of Meeting of the Woman's Auxiliary to the Southern Medical Association*
Mrs. W. A. Selman, Atlanta

*Reports of Officers*
*Report of Auditing Committee*
*Report of Resolutions Committee*
*Report of Registration Committee*
Mrs. Allen H. Bunce, Atlanta

*Report of Awards Committee*
Mrs. Bruce Schaefer, Toccoa
Mrs. A. W. DeLoach, Waycross
Mrs. W. E. Matthews, Augusta

*Report of Courtesy Committee*
*Business*
*Report of Nominating Committee*
*Election of Officers*
*Installation of Officers*
*Presentation of President's Pin to the Retiring President*
Mrs. Joseph Yampolsky, Atlanta

*Announcement by the President*
Mrs. Sam Anderson, Milledgeville
*Adjournment*

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Thursday, April 29
*Post-Convention Board Meeting*
Mrs. Sam Anderson, Milledgeville

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## RULES TO GOVERN THE CONVENTION

1. To gain recognition, a delegate is requested to rise, address the chair, give her name and the name of her auxiliary.
2. No delegate shall speak more than twice on the same subject, and is limited to two minutes each time.
3. Reports shall not be read from auxiliaries which are not represented by delegates but shall be filed with the secretary.
4. All original motions or resolutions shall be made by submitting two copies; one to the Resolutions Committee, and one to the Recording Secretary.
5. Reports of delegates and district managers are limited to two minutes.
6. No one is entitled to vote before she is registered.
7. All persons appearing on the program must be seated near the platform when the session opens.
8. Badges must be worn by members of the voting body during all general sessions of the convention.
9. Delegates' privileges are not transferable.

Whispering conversations greatly retard the business of the meeting; order must be maintained at all times. Please be prompt. Meetings will begin promptly at the time announced. Reports must conform to the time allotted.

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**The Ninety-Eighth Annual Session of the Medical Association of Georgia will be held in Atlanta, April 27-30, 1948. Make your hotel reservations immediately.**

## NEWS ITEMS

The Ninth District Medical Society will hold its Spring meeting at the Alto Medical Center, Alto, April 17, 1948. Program: Business meeting; Scientific meeting: "Alto Medical Center Service Available to Private Physicians," Dr. T. F. Sellers and Dr. C. D. Bowdoin, Atlanta; "Interpretation of Syphilis Serologic Tests," Mr. Emory Webb; "Rapid Treatment of Syphilis," Dr. Evans W. Thomas. Refreshments and dinner in main dining room. Physicians and their wives who desire to spend one or more days prior to the meeting or after the meeting, observing the work of this center, can be accommodated at the hospital. Rooms are free and meals may be obtained at 25 cents per meal. Any physician who might elect to spend additional time will be welcome to observe any operations of interest to him at the center. Informal tours of the center will be made immediately before and after the meeting, but clinical work will probably be terminated by or before 11:00 A. M. on the day of the meeting. Address communications regarding the meeting to Dr. Hartwell Joiner, secretary, Gainesville.

* * *

Members of the Association are reminded that hotel reservations for the Atlanta session, April 27-30, 1948, should be made immediately. If you have any trouble procuring a room, call Dr. John W. Turner, Vernon 5865, Atlanta.

* * *

The Bibb County Medical Society held its regular meeting at Ridley Hall, Macon, February 3. Program: Round Table Discussion of Edema; moderator, Dr. Tom Ross. Dr. A. M. Phillips, secretary.

* * *

Dr. Edmund A. Brannen, Macon, announces the opening of his office for the practice of obstetrics and gynecology, 400 Doctors Building, 700 Spring Street, Macon.

* * *

Dr. Robert B. Crichton, formerly of Lithonia, has accepted a staff position at the State Hospital, Milledgeville.

* * *

The Crawford W. Long Memorial Hospital, Atlanta, held its regular staff meeting in the hospital dining room, February 10. Program: "Ulcerated Colitis with Malignant Changes," by Dr. Mary Gilliland, which was discussed by Drs. Charles Holloway, Frank Harris, Darrell Ayer, and Wm. F. Lake. Medical section meeting was held in the medical library. Round table symposiums: "Basic Principles of the Blood Sedimentation Test," led by Dr. C. Purcell Roberts; "Practical Liver Function Test," led by Dr. Darrell Ayer. Surgical section met in the clinic reception room. Case report, "Bleeding Peptic Ulcer," by Drs. Kells Boland, Jr., and John Akin. Pediatric section meeting was held in the clinic lecture room.

* * *

Dr. H. B. Dean, a native of Macon, and graduate of the University of Georgia School of Medicine, Augusta, announces the opening of his offices at Unadilla for the practice of general medicine, succeeding Dr. W. A. Shimmel who has moved to Dundee, Ill.

* * *

Dr. J. M. Feder, formerly chief of the laboratories in Anderson, S. C., has been added to the staff of the Phoebe Putney Hospital, Albany, as pathologist. An inventor, research worker, and author, Dr. Feder is known in medical circles for his pioneer work in establishing blood banks, and he anticipates placing special emphasis on the expansion of cancer diagnosis at the Phoebe Putney Hospital with the adoption of the "rapid freeze" section diagnosis.

* * *

Dr. Jay Goldstein and Dr. Leon J. Goodman, Warner Robins, announce the removal of their offices to their new medical center, Commercial Circle, Warner Robins. Dr. Goldstein is practicing general medicine and pedia-

trics. Dr. Goodman is limiting his practice to obstetrics and gynecology. Dr. Goodman also has offices in the Bibb Building, Macon.

* * *

Dr. C. C. Goss, Ashburn, a graduate of the University of Georgia School of Medicine, Augusta, and for the past two years with the Army Air Corps, McChord Field, Tacoma, Washington, announces the opening of offices in the McKenzie Building, Ashburn, for the practice of medicine.

* * *

Dr. Wilbur D. Hall, Calhoun, will be made a fellow of the Southeastern Surgical Congress at its meeting at the Hollywood Beach Hotel, Florida, in April. This honor ranks next to a fellowship in the American Colleges of Physicians and Surgeons, and is the highest professional honor that can be conferred by the Southeastern Congress.

* * *

Dr Lester Harbin, Rome, recently addressed the Men's Club of the Lindale Methodist Church, Lindale. Dr. Harbin, who served with the armed forces during World War II, showed slides of wounds and described the manner in which they were treated. He also gave an interesting outline of advancements in the field of medicine during the past 10 years, and the development of presurgery treatment.

* * *

Dr. Milford B. Hatcher, Macon surgeon, has been named a diplomate of the American Board of Surgery, following an examination before a reviewing board of surgeons held in New Orleans.

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Dr. Horace G. Joiner, Douglas, recently released from the U. S. Navy, announces association with Dr. George M. Ricketson, Douglas, in the practice of medicine.

* * *

Dr. Harold P. McDonald, Atlanta, was recently guest speaker at the 49th annual meeting of the Tri-State Medical Association, Charleston, S. C., where some 300 physicians from North and South Carolina and Virginia were present. His subject was, "Contributions of Urology to Life Expectancy".

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Dr. A. A. Rogers, Commerce, was recently elected chairman of the City Board of Health, Commerce.

* * *

Dr. A. A. Rogers, Jr., Commerce, announces the opening of offices in the Rogers Building, Commerce, for the practice of medicine. Dr. Rogers graduated from the University of Georgia School of Medicine, Augusta, and entered the U. S. Navy, where he served as lieutenant (j.g.) during World War II. He was stationed at Camp Lejuene, N. C., and later served as medical officer in the Navy Recruiting Service, Macon. He also served as assistant resident physician in the Macon General Hospital, practicing medicine and pediatrics.

* * *

The Fulton County Medical Society dinner meeting was held at the Academy of Medicine, Atlanta, March 4. Program: "Symposium on Backache"; moderator, Dr. Vernon E. Powell. Speakers: Drs. W. P. Warner, Jr., orthopedist; James H. Semans, urologist; Homer S. Swanson, neurologist; Jos. S. Skobba, psychiatrist, and John B. Cross, gynecologist.

* * *

The Georgia Society of Ophthalmology and Otolaryngology held its annual meeting at the Academy of Medicine in Atlanta, March 5-6. The lectures began at 9 o'clock March 5. There was no registration fee for out of state guests attending the meeting.

The distinguished lecturers were: Drs. Bennett Y. Alvis, St. Louis; Arthur J. Bedell, Albany, N. Y.; Ramon Castroviejo, New York City; J. Brown Farrior, New Orleans; French K. Hansel, St. Louis, and J. Elliott Scarborough, Atlanta.

The Upson County Medical Society held its February meeting at Hotel Upson with eleven members and one guest present. Dr. R. E. Dallas, the president, presided and, before introducing the speaker, brought up two matters of business. One, concerned proposed changes in the hospital plans, was referred to the Hospital Committee, consisting of Drs. Carter, Blackburn and Dallas, with Dr. Sappington, last year's president, acting in an advisory capacity. The second matter, concerned quarantine of contagious diseases and was referred to a committee appointed by Dr. Dallas and made up of Drs. Adams, Bridges and Girardeau. After dinner Dr. Dallas presented Dr. Byron Hoffman of Atlanta, who delivered an illustrated lecture on "The Role of Iron, Liver and Folic Acid in the Treatment of Anemia."

## NEW BOOKS

*Minor Surgery*: by Frederick Christopher, B. S., M.D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School, Chief Surgeon, Evanston (Illinois) Hospital. Sixth edition. 1058 pages, 937 illustrations on 595 figures. Philadelphia & London: W. B. Saunders Company, 1948. Price $12.00.

*A Manual of Pharmacology*—And Its Application to Therapeutics and Toxicology: by Torald Sollmann, M.D., Professor Emeritus of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Seventh edition. 1132 pages. Philadelphia and London: W. B. Saunders Company, 1948. Price $11.50.

*A Manual of Clinical Therapeutics*—A Guide for Students and Practitioners: by Windsor C. Cutting, M.D., Professor of Therapeutics, Stanford University School of Medicine, San Francisco, California. Second edition. 712 pages, with 30 illustrations. Philadelphia and London: W. B. Saunders Company, 1948. Price $5.00

*Treatment in General Practice* by Harry Beckman, M.D., Professor of Pharmacology, Marquette University School of Medicine. Milwaukee, Wisconsin. Sixth edition. 1129 pages. Philadelphia and London. W. B. Saunders Company, 1948. Price $11.50.

## RECORDING YOUR DATA IN THE NEW AMERICAN MEDICAL DIRECTORY

The American Medical Association reports that 115,000 physicians have returned their Directory Information Cards supplying data for the new American Medical Directory now being compiled. Those physicians who have received these cards and have not returned them are urged to do so at once. This information is needed for your listing in the 1949 Directory.

Please use the card that has been addressed to you, as it bears the serial number which has been assigned to your data. If a card is received by you addressed to another physician who as moved away, return the card with the doctor's new address written on the slip bearing his name and serial number if you can supply the information.

Before filling out your card, check the list of specialties on the back of the card and select only one specialty, indicating, in the space provided on the front of the card, either that your practice is limited to that specialty or that you give special attention to that branch of medicine along with general practice. Fill in the lines marked "Intern" and "Resident" *only* if you are now serving an internship or residency in a hospital.

## POSTGRADUATE MEDICAL ASSEMBLY

The Atlanta Postgraduate Medical Assembly, sponsored by the Fulton County Medical Society and the Fifth District Medical Society, was held at the Bilt-

more January 27-30. Dr. Lester B. Dragstedt of Chicago was unable to attend because of illness, but his place was ably filled by Dr. Howard Mahorner, Assistant Professor of Surgery at Tulane. Dr. Mahorner spoke on "Diverticula of the Small Intestine" and "Surgical Lesions of the Large Bowel." The weather delayed the arrival of some of the guest speakers, requiring a little reshuffling of the order of papers, but with these exceptions the program was presented as planned.

The fame of the speakers makes comment on their presentations unnecessary. Every paper was worth while. From the point of view of modernity perhaps three speakers may be cited: Dr. Helen B. Taussig gave her present views on the "blue baby" operation based on the experience at the Hopkins with more than 450 cases; Dr. Chester Keefer presented the most recent data on the use of the antihiotics and the newer bactericides; and our own Dr. Rufus F. Payne told of the results of the use of streptomycin at the Battey Tuberculosis Hospital. Dr. Payne, however, emphasized that the employment of streptomycin in no way rendered obsolete older methods of proven worth in the treatment of tuberculosis; and indeed these are all that are necessary in many cases.

Thursday evening a banquet took the place of the regular meeting of the Fulton County Medical Society and the spring meeting of the Fifth District Medical Society. This occasion was graced by the presence of many ladies of the auxiliaries. Dr. A. C. Ivy delivered a memorable address on "The moral of the Nazi war crimes of a medical nature."

The registration exceeded 600 and included doctors from twenty states: from Massachusetts to Texas, from Minnesota to Florida. The Atlanta Postgraduate Medical Assembly may finally be said to have passed beyond the experimental stage.

—L. MINOR BLACKFORD, M.D.

## VETERANS' NEWS

"Blindness is not a handicap for those who have faith" was the topic of a sermon recently delivered to ill and disabled veterans in the Veterans Administration hospital at Atlanta, Ga.

The speaker—a blind preacher—was a guest of the VA chaplain.

* * *

The American Bible Society of New York, during 1947 alone, donated 3,000 Bibles, 5,400 Testaments and 7,000 portions to Veterans Administration hospitals and homes.

* * *

Motion pictures of a religious nature are being shown during chapel services in a number of Veteran Administration hospitals.

Most popular films are "Suffer, Little Children," dramatization of the parable of the Prodigal Son, and the "Life of Saint Paul."

* * *

The Chicago *Times* donated the ecclesiastical appointments of a new quonset hut chapel recently completed for patients in the Veterans Administration hospital in Hines, Ill. The newspaper also printed programs for the dedication services.

## OBITUARY

*Dr. Ben Terrell Johnson, Sr.*, aged 59, prominent Bluffton citizen and physician, died January 19, 1948. Dr. Johnson was a native of Randolph County, and was the son of the late Mr. and Mrs. Ben Hill Johnson. He graduated from the Atlanta School of Medicine, Atlanta, in 1912, and had practiced medicine in Bluffton for 36 years. He was a member of the Bluffton Baptist Church. Surviving are his wife, Mrs. Annie Kate Johnson; a brother, Dr. R. H. Johnson, Abbeville; a sister, Mrs. Walter Martin, Atlanta and two sons, James Lewis Johnson, Bluffton, and Ben Terrell Johnson, Jr., Montgomery, Ala. Funeral services were held at the family home in Bluffton, with the Rev. Charles E. Allen officiating. Burial was in Bluffton Cemetery.

* * *

*Dr. John F. McMath*, aged 92, Americus, retired physician and one of Sumter County's oldest citizens, died at his home January 28, 1948, following a long illness. A native of Sumter County, Dr. McMath was born in 1856, and graduated from the University of Georgia School of Medicine, Augusta, in 1889. He practiced medicine in his native county until his retirement several years ago. Survivors include his widow, Mrs. Verina Killen McMath; five daughters, Mrs. Harry Crews, Moultrie; Mrs. C. R. Hamrick, Burnsville, N. C.; Mrs. Howard Bankston, Mrs. Gus Anderson, and Miss Lucy McMath, all of Americus; two sons, James McMath, Georgetown, S. C., and Carl McMath, Leeds, Ala.; 19 grandchildren and 2 great-grandchildren. Funeral services were held at the Davis Chapel, with the Rev. M. C. Gardner and the Rev. R. L. Bivins officiating. Burial was in Oak Grove Cemetery, Americus.

* * *

*Dr. John Marvin Meadows*, aged 87, widely known retired physician and civic leader, died at his home in Vidalia January 22, 1948. Dr. Meadows was the son of the late James Washington and Millie Bell Powell Meadows of Washington County, but his birthplace was Johnson County. He graduated from the University of Georgia School of Medicine, Augusta, in 1888, and had been a resident of Vidalia for the past 58 years. He was a member of the Vidalia First Baptist Church, and the Masons. Dr. Meadows did experimental farming and was the first grower of tobacco in Toombs County, proving the weed could be grown profitably long before a market was established. He is survived by his wife, Mrs. Sallie Meadows; two sons, Curtis W. Meadows and Alger H. Meadows, both of Dallas, Texas; five daughters, Mrs. W. L. Perryman, Talbotton; Mrs. T. P. Cheney, Pinehurst, N. C.; Mrs. William Broadfoot, DeKalb, Texas; Mrs. J. K. Acton, Shreveport, La.; Mrs. George Rhodus, Odessa, Texas, and 12 grandchildren. Funeral services were held at the First Baptist Church, with the Rev. J. V. Springer officiating, assisted by the Rev. Ewell Nelson, and the Rev. Roy Gardner. Burial was in Pine Crest Cemetery, Vidalia.

* * *

*Dr. Noah G. Pirkle*, aged 76, one of Buford's oldest physicians, died at his home January 5, 1948. Dr. Pirkle graduated from the University of the South Medical Department, Sewanee, Tenn., in 1898, and had spent practically his entire life in Buford. Surviving are his wife; one daughter, Mrs. Roy Lawrence; one son, Benson Pirkle; five grandachildren; three brothers, and two sisters. Funeral services were held at the Bethlehem Church, with the Rev. Paul Smith officiating. Burial was in Bethlehem Cemetery, Buford.

* * *

*Dr. John D. Rice*, aged 73, prominent Hiawassee and Towns County physician, died at his home January 23, 1948. Dr. Rice was a native of North Carolina, and graduated from the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1900. He had resided in Hiawassee for the past 35 years. Besides his private practice, Dr. Rice was Towns County physician for approximately 20 years. He was a Mason, member of the Baptist Church, and active in religious circles for many years. Survivors include his wife, the former Miss Bell Penland of Clay County, North Carolina; two daughters, Mrs. Frances Twiggs, Miss Lougene Rice, Hiawassee; one grandson, Lamar Twiggs; two brothers, James and W. L. Rice of Pedro, Calif.; and one sister, Mrs. J. S. Ingram, Grand Junction, Colorado. Funeral services were held at the Hiawassee Baptist Church. Burial was in Lower Hightower Cemetery, Hiawassee.

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# MANAGEMENT OF INJURIES OF THE ELBOW JOINT

CALVIN SANDISON, M.D.
*Atlanta*

Before discussing injuries to the elbow, it should be interesting to consider briefly how man came to acquire this joint and its mechanical importance to his freedom of motion.

The elbow joint evolved late in the development of the upper extremity of animals. The hand and shoulder appeared very early, for the anterior fin of a fish is really a large hand jointed to the body without an elbow. At times a human is born with a hand arising directly from the shoulder.

In the amphibian the two anterior fins and the two pelvic fins turn downward to form four stubby legs for walking. Since this arrangement proved inadequate for the land animal, he developed elongation of his extremities with a joint (elbow) between the hand and shoulder to provide the necessary speed in running and the spring action in jumping.

In man the elbow has come to be a joint whose greatest usefulness is motion, not only in extension and flexion but in rotation of the whole forearm. The palm of the hand, for instance, can be faced completely in front of us as well as completely behind us without the shoulder playing any part. We have thirty degrees of flexion and ninety degrees of extension beyond a right angle.

It is this useful motion we wish to preserve in treating injuries of the elbow joint. We must remember this when we splint the arm, when we operate or manipulate, and in management during the healing stage. Gentleness is of utmost importance in handling this joint. Roughness, unthinking manipulations and too vigorous physiotherapy tend to decrease movability more than in any other joint. Such treatment brings on excessive serofibrinous exudate and adhesions with resultant shrinkage of the capsular membrane. Physiotherapy should be of the expert type and by a person who recognizes this special function of the elbow, as compared for instance with a knee, hip or shoulder.

After injury an elbow will also lose a part or much of its motion unless we restore the anatomic position of displaced bones. This restoration can best be done, with exceptions, by exposing the fracture through an incision. After proper reduction, the bones must be held in place with a wire suture, screw, pin, or plate constructed from metal least irritating to bone tissues. Heavy chromic catgut, kangaroo tendon and silver have been discarded. We now use exclusively a steel with high nickel content which provides its rustproof quality. This metal does not delay physiologic bone cell repair. It should be removed after full healing of the bone is assured. If left in the body, symptoms and signs of a foreign body reaction are most apt to develop years later. It is important to remember that the induction current of a diathermy machine will raise the temperature of this metal to

Read before the Third District Medical Society, Dawson, November 1946.

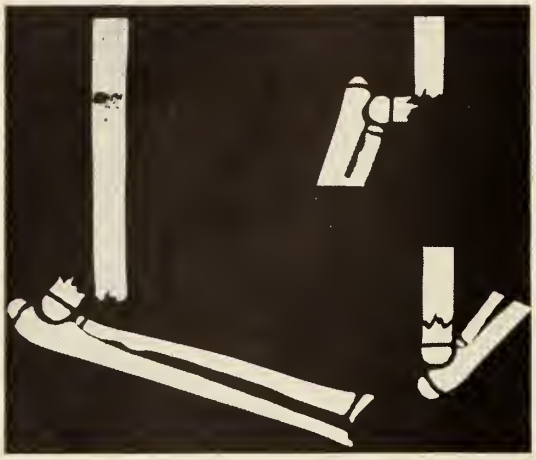


Fig. 1. Supracondylar fracture of humerus in a child (diagrammatic) showing posterior displacement of distal part of fracture. The two inserts illustrate a method of reduction. The distal bone is brought to a right angle to the main shaft by hyperextension of the elbow. Traction, by means of two fingers placed back of the elbow plus acute flexion of the elbow, reduces the fracture. A posterior plaster splint from shoulder to midpalm is applied, cutting all bandage in front of the elbow.

white heat and produce a serious burn.

For the specific management of injuries to the elbow, I shall first discuss a simple dislocation. The requirements of treatment are two:

1. A general anesthesia deep enough to completely relax muscles so that the front edge of the coronoid of the ulna will not scratch the joint surface of the humerus as the radius and ulna are brought forward on the humerus.
2. An x-ray examination to determine whether or not there is an associated fracture.

In a painful sprain, with swelling, a circular plaster cast from the distal palmar crease of the hand to just below the shoulder, with the elbow at right angle, gives maximum comfort. Plaster casts should not be applied beyond the distal palmar crease of the hand. The fingers need to have full range of motion. The cast must be split from one end to the other to allow for any further swelling and it should be worn no longer than two or three days. Thereafter a sling, local heat and active motion are advised.

Our most common fracture is a break through the thin part of the humerus in children (Fig. 1). This is called the supracondylar fracture. It can be very complicated and mismanagement of it may lead to permanent loss of the use of the forearm and hand. Swelling is extensive and comes from hemorrhage and from constriction of the brachial blood vessel by the sharp edge of the humerus (Fig. 2). The skin may crack from internal pressure and large blebs may form on the surface. This fracture requires immediate hospitalization and attention with a priority on a par with that of a compound fracture and exceeding that of a broken hip.

The requirements of treatment are: (1) closed reduction under general anesthesia; (2) posterior and lateral plaster splints with elbow in extreme flexion; and (3) close observance of swelling and avoidance of tight bandaging.

In preparing for reduction, shall we proceed immediately or shall we wait for swelling to subside as some advocate? The answer is clear if we understand the cause for the swelling. As Dr. Sterling Bunnell has put it, the fascial boundaries anterior to this fracture create a closed compartment through which the main blood vessels pass. The displaced posterior bone pulls the anterior fascial wall backward, dragging the brachial artery along with it against the sharp front edge of the humeral shaft (Fig. 2). The artery is greatly but may not be completely occluded. A little blood gets through but not enough to nourish the tissues. The forearm promptly begins to swell—a reaction well known when a main artery is so obstructed. This adds to the swelling, present from the beginning, around the fracture, making the closed compartment tighter. It is now like a rigid box and cannot expand any more than the brain can expand within its dural covering.

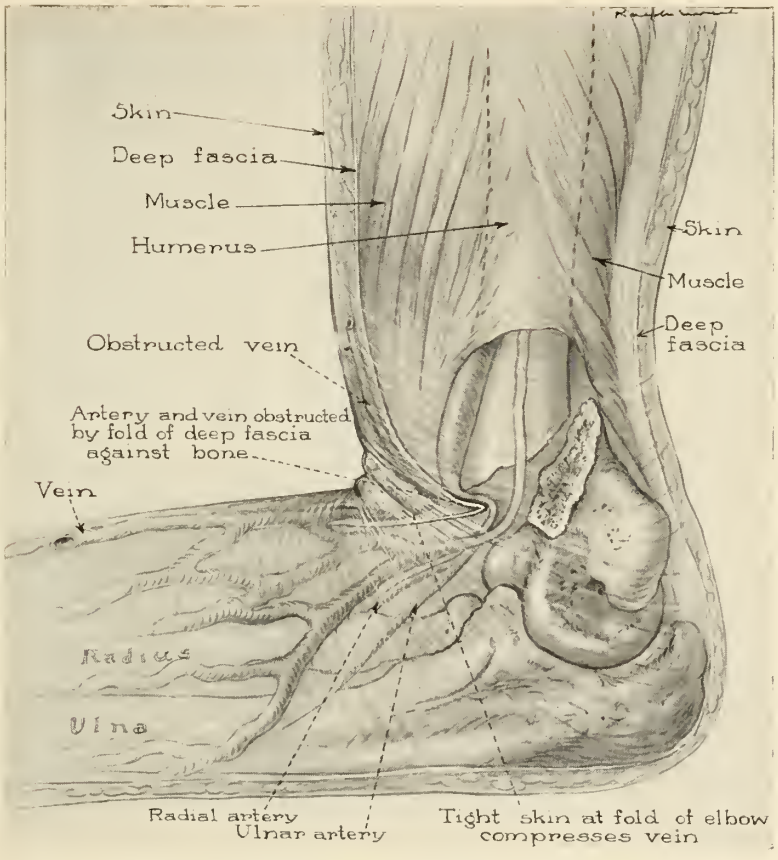



**Fig. 2. A practical conception of the factors which cause Volkmann's ischemic paralysis. (Courtesy of Dr. Sterling Bunnell, "Surgery of the Hand," J. B. Lippincott Company, Philadelphia). Dr. Bunnell interprets as follows: The anterior fascia of the elbow creates a closed compartment in a supracondylar fracture of the humerus. The main venous blood return from the forearm passing through this closed compartment is blocked. Collapse of the main vein is shown. The forearm muscles are engorged with blood due to this venous block. The artery is almost, but not quite, obliterated by the sharp edge of the fracture. Distal swelling follows when an artery is so constricted. Six to forty-eight hours of such vascular obstruction may cause death of muscles and their gradual conversion into fibrous bands which permanently contract the wrist and fingers. Prompt reduction of the fracture is indicated.**

The deep and superficial veins which pass through this box are now completely blocked. All tissues of the forearm and hand are engorged with blood. If the capillary pressure rises to 100 mm. of mercury these small vessels rupture and blood extravasates throughout the forearm and within the muscles. This situation is the very beginning of Volkmann's ischemic paralysis and if allowed to continue six to forty-eight hours may destroy the muscles which gradually become fibrous bands, months later producing that terribly crippling condition of permanent contracture of the wrist and fingers. Of twenty-nine cases of this paralysis in one bone clinic, all were associated with supracondylar fracture of the humerus.

It is apparent then that in this fracture we must promptly unblock the compressed artery by reduction of the fracture to stop the vicious circle of swelling. We have never found it necessary to make an incision into the tight box to relieve pressure, as urged by some. The reduction is made by manipulation under general anesthesia, as illustrated. The arm is put up in acute flexion—the only position which will hold the bones in place—and immobilized with a posterior plaster splint, going well up



Fig. 3. Diagrammatic drawing to illustrate tension of the ulnar nerve when the elbow is at a right angle. Following fractures of the elbow the ulnar nerve may become fixed or constricted in its channel behind the epicondyle. Pain and muscle atrophy of ring, little finger and part of thumb follow. Nerve tension is relieved by transplanting the nerve anteriorly.

over the shoulder, reinforced with lateral splints. The bandage must be loose and the lower arm, front of the elbow and upper forearm entirely unobstructed. We write on the chart "Watch for swelling" and show the nurse or intern where to split the bandage and spread the cast at any hour day or night for the first forty-eight hours. Extreme flexion, as I have shown, is needed to hold the bones in place but we never hesitate to "give up" this essential position to relieve swelling, even if there is a partial loss of the bone setting. The bones can always be reset a few days later after swelling has subsided, but we can never fully undo the damage of an ischemic paralysis.

Since we are dealing with children from two to eight years of age, callus forms rapidly in this fracture. After seven to ten days we can let the forearm down, put the elbow at a right angle and fix the arm in a plaster cast for another week. Thereafter we urge heat and active motion. The parents are prepared for the long period (six months sometimes) required for the child to obtain full motion. The child should not be made to carry weights such as buckets of sand or an electric iron. Forceful stretching has no place in overcoming a stiff elbow, because it makes the joint weep, increases adhesions and contracts the capsule. The parents should practice with the

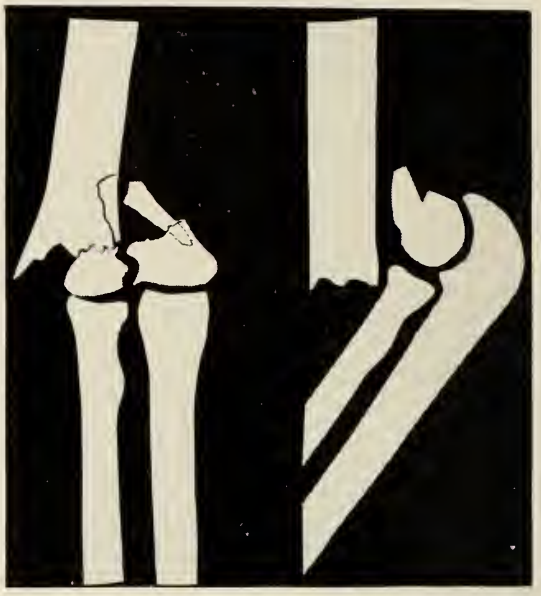


Fig. 4. Supracondylar fracture of humerus in an adult (diagrammatic), anteroposterior and lateral views, before reduction.

child normal, active motion at intervals each day. This, plus time and activity in play, will give the best result. Years later these elbows perform with strength, comfort and good motion; stiffness is unusual.

An interesting case was a seven year old boy who came to the hospital promptly after an injury which had produced this fracture with wide displacement of the bones. The shaft of the humerus had pierced the front of the elbow through a three inch skin laceration and protruded two inches on the forearm. A compression bandage had been applied for hemorrhage. The radial pulse could not be obtained and the median nerve area of the hand was numb to pin point. The boy was prepared for operation. Under general anesthesia a pneumatic tourniquet was applied just below the shoulder with 200 mm. of mercury. The exposed bone and soft tissues were covered with sterile gauze. The arm was cleansed with soap and water, iodine and alcohol up to the edges of but not in the wound. The wound was irrigated with a quantity of warm saline solution and explored. The brachial artery, brachialis muscle and joint capsule were completely

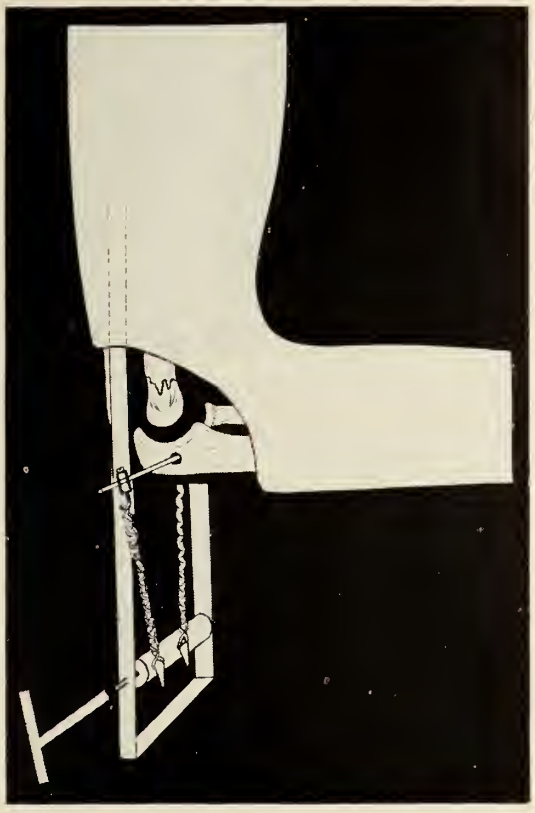


Fig. 5. Drawing showing details of plaster skeletal traction (Hoke) used for reduction of fracture shown in Figure 4. A Steinmann pin is drilled through the olecranon of the ulna. Traction is obtained by connecting each end of the pin with small chains to the ratchet which is attached to the plaster cast. Only the arm portion of a body plaster cast from the crest of the ilium upward, arm included, is shown.

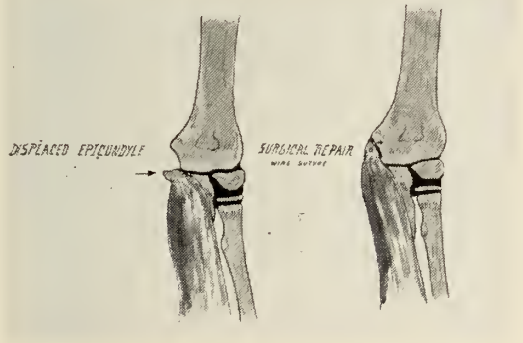



Fig. 6. Fracture of internal epicondyle in a child.

severed. The biceps tendon was torn from the radius, and the median nerve, though visibly intact, was swinging free. The bones were replaced by manipulation outside the wound. The torn ends of the artery were ligated, the muscles sutured and the wound closed. The whole procedure was done with gentleness. The torn joint capsule was not sutured for fear of producing a check rein

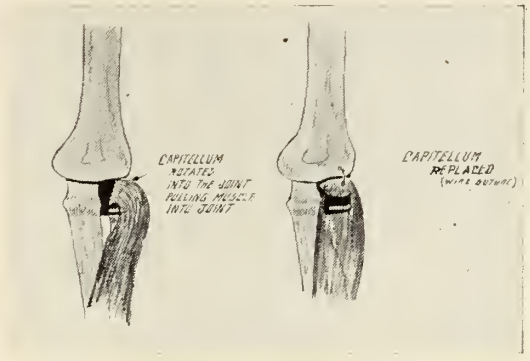



Figure 7. Fracture of external epicondyle in a child.

of adhesions. Swelling was extreme for five days, so all bandaging and plaster splints were kept loose. After the fifth day the elbow was acutely flexed and fixed snuggly in new plaster splints. The wound healed in fourteen days. The x-ray films showed sufficient union of the fracture to permit motion of the elbow the third week. The bones united in satisfactory position and alignment. Eighteen months later the boy had a strong, comfortable elbow. He had full active flexion motion and lacked fifteen degrees of full extension. He had normal use and sensation of the hand. The radial pulse was still not palpable. This was before the days of penicillin which we now use in all compound fractures; 30,000 units are given every three hours by injection for seven to ten days.

An ugly complication of this fracture can come from allowing the bones to unite with a loss of the normal "carrying angle" of the elbow. Joint function will be good but the arm will have a bow similar in appearance to a bow-leg. The deformity can always be prevented at the time of the fracture reduction, if good x-ray films are made. An old deformity is corrected by chiseling across the lower humerus, realigning the bones and holding them with some type of internal fixation.

The second complication, not too uncommon, is an ulnar nerve neuritis and partial paralysis causing flexion contracture and pain in the ring and little fingers and weak-

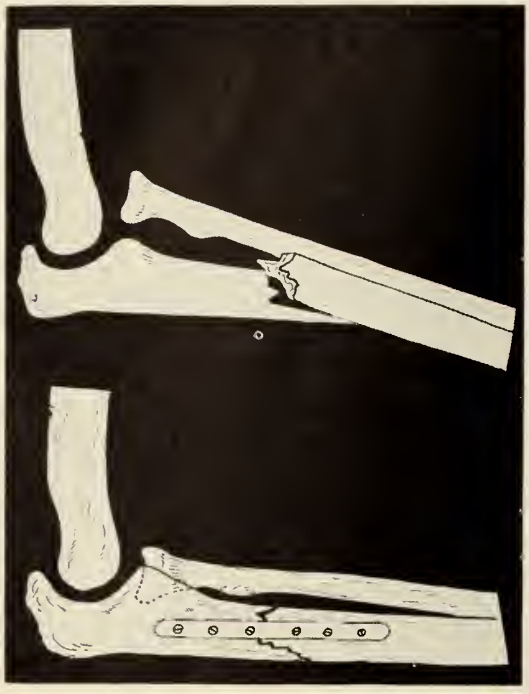


Fig. 8. Dislocation of the head of the radius associated with fracture of the shaft of the ulna (Monteggia). Such dislocation must be recognized and corrected as well as correction of the more obvious injury to the ulna. Open reduction of the ulna with plate and screw fixation is a most satisfactory method. The head of the radius then usually reduces; if not, surgical repair of the torn ligament may be necessary. Complete reduction of the radius can always be determined with a true lateral x-ray study.



Fig. 9. Dislocation of the head of the radius with compression-angulation fracture of the ulna. This may be satisfactorily handled with closed correction of the malalignment of the ulna.

ness of the thumb (Fig. 3). This is often a late reaction, sometimes coming on years later. Recently we operated on a woman thirty-two years of age whose elbow was fractured when she was five. The ulnar nerve symptoms just mentioned first appeared only four months ago. Gradually pain in the fingers became quite severe. The nerve was transplanted forward which immediately relieved the pain. The nerve was found adherent and flattened in its bed behind the epicondyle. Once begun the process goes on rather rapidly. At the first sign of pain or numbness in the ring and little fingers and weakness of the adductor muscles of the thumb, no time should be lost in transplanting the nerve to prevent permanent damage.

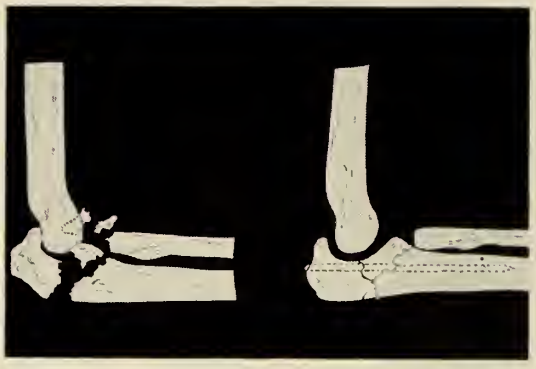


Fig. 10. Comminuted fracture of the head of the radius requiring complete, prompt excision of the head fragments. Also shown here is fracture of the olecranon and coronoid of the ulna reduced and held with an intramedullary, medium-size Steinmann pin. The end of the radius has been rounded.

In the adult the supracondylar fracture with displacement as a rule cannot be managed successfully by the closed method described for children. There must be either an open reduction or treatment with continuous traction (Fig. 4). For this we usually like the Hoke plaster traction apparatus (Fig. 5).

Many other types of fractures with displacement are open reduction problems. Failing to recognize that certain fractures should be surgically reduced and held with a wire, pin, screw or plate, will lead to disappointing results. An epiphyseal fracture can be misinterpreted and the treatment mismanaged if one is not familiar with the normal growing child. For example, if the epicondyle or capitellum is displaced it must be wired back to the shaft through a drill hole placed through the bone (Figs.

6 and 7).

Another condition which can easily be overlooked is a dislocation of the head of the radius (Figs. 8 and 9). Comminution fracture of the head of the radius requires early removal of the fractured bones, leaving the end of the shaft smooth and free of overhanging periosteal tabs (Fig. 8). Motion of the joint is begun the first few days after operation.

There are some elbows which are painful, stiffish and weak even after the best laid plan of treatment has been meticulously followed. These are joints which have been damaged beyond repair. Severe traumatic arthritis produces a painful weak joint. In these we still can obtain a comfortable and useful arm. The patient will have to choose between an arthroplasty (complete reconstruction of the joint) or an elbow surgically fused in a position most suitable to him.

## SOME OBSERVATIONS ON THE FITTING OF ARTIFICIAL LIMBS

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The artificial limb manufacture is becoming extensive. All over the country factories for the fabrication of artificial limbs have sprung up, each one advocating some new idea in the construction of a limb, and each claiming for his product superiority over all others. From time immemorial man has striven to excel in everything he has undertaken, from which has sprung all progress in the world. It is not certain just when the manufacture of artificial limbs first began. The peg-leg was probably in common use up to and including the period of the Civil War, about 1865. It is said that Mr. J. E. Hanger, president and founder of J. E. Hanger Artificial Limb Company, Inc., lost a leg during the Civil War and made an artificial leg for his own use which led to the establishment of this company at or about the close of the war. Whether any of the other companies antedate this, I do not know. It has also been said that during the time when lumbering was at its height throughout the middle and northwestern states that every lumber-jack who lost a leg made for his own use a peg-leg of varying design, and from this he branched out into the manufacture of artificial limbs.

My experience in fitting artificial limbs is quite limited, being confined entirely to the past six or eight years. I had always felt that it was the duty of the orthopedic surgeon to use every means at his command to save a leg rather than amputate it. For some reason amputations always gave me a depressed feeling. I never cared to do them in the general hospitals where I served prior to taking up specialized work and therefore never had any occasion to fit artificial limbs until fairly recently, or within the past six or eight years.

I, like many of the doctors elsewhere, paid little attention to this phase of the treatment afforded those unfortunates whose limbs had been ampuated, but ordered the artificial limb which apparently was most suitable in the individual case, assuming that a manufacturer, having spent his whole life in this business, knew more about what was needed than I did. After the past six or eight years in this work, however, I have come to look upon the matter in an entirely different light. There are many strictly medical factors which enter into the selection of an artificial limb, which only the surgeon is capable of understanding after having possibly treated the limb for an indefinite period, later amputated it, observed the gross and microscopic pathologic changes which existed, and later examined the stump and observed areas of tenderness,

whether directly over the terminus of the nerve and a condition often referred to as neuroma. Another very important point to be taken into consideration is the character of the blood vessels and circulation to the stump. This is particularly important in case of Beurger's disease or endarteritis obliterans.

I presume every one doing surgery has at one time or another had a case of this dreaded disease to treat and has felt the uncertainty in regard to where to amputate in order to procure the best stump and do the most good for his patient. I believe that too often this amputation is made too low, the vessels being already too badly sclerosed and friable to hold ligatures which often slip, permitting postoperative and occasionally fatal hemorrhage. In some cases, due to the sclerosed character of the vessels, bleeding does not occur at once and the wound is closed, without tying these vessels. This is a very dangerous and often disastrous procedure. I believe it is the duty of every surgeon to know the anatomy of the part and be able to locate the main arteries and veins as well as the nerves supplying the part before attempting to do any type of surgery, and especially amputations. There is, however, one condition or danger over which there is no control and that is an embolus that cuts off the blood supply to a vital organ with death certain and almost instantaneous.

Through observation of the numerous cases with amputation stumps during the past few years, the question has occurred to me as to whether the so-called Beurger cases do not have as one etiologic factor at least, trauma to the blood vessels. This theory has been suggested to me because of the number of cases admitted to the orthopedic service with histories of old fractures which had been treated over a long period of time in an effort to save the limb. An osteoporosis had formed and amputation was necessary for relief of the intense pain suffered by the patient. In doing the amputation, in most of these cases, heavy calcium deposits have been found in the vessel walls in the region of the old fracture. It is almost inconceivable that a fracture of a long bone of an extremity could occur without also having damage done to blood vessel walls external to the osseous structure involved. In analysis of the blood, there is a certain amount of calcium present which we know is utilized in blood-clotting in case of hemorrhage. It, therefore, seems not unreasonable to assume that in case of damage to blood vessel walls this calcium is deposited to prevent rupture of the weakened wall and in so doing the lumen of the vessel is accordingly narrowed. If this theory is correct, then would it not be reasonable to assume that wearing a rigid socket on the stump would cause more trauma and a secondary breaking down of the tissues?

The artificial limb manufacturer is not a doctor and is not capable of determining the condition of the stump and of knowing the dangers incident to fitting with an unsuitable socket. His primary aim is to sell the limb, and due to the keen competition in this field he must act quickly before some other manufacturer comes along and beats him to his sale.

Highpower sales talk is heard every day. The agents are always boosting their products as being far superior to any other on the market. I do not mean to insinuate that these men deliberately try to sell a prospect something that they know will be detrimental to his stump and possibly endanger his life, yet I do believe they unconsciously do just this very thing. Too often I have seen men whose limbs have been reamputated repeatedly because of a painful, infected stump, following the wear-

ing of an artificial limb, usually of the rigid socket variety. The histories in these cases indicate that the stumps were apparently healthy and the wounds firmly healed before the sockets were fitted, yet within a short time after beginning weightbearing on the affected limb the patient experienced more or less discomfort and the tissues started to swell and become red and indurated, followed shortly by sloughing. Of course, with each reamputation, there is alternation of the stump which necessitates purchase of a new socket for the artificial limb or possibly a new limb. This is additional expense to the wearer. The old limb is as a rule worthless, since it cannot be altered to fit another patient without great expense and loss of time. All such discarded legs and arms are a total loss. Now it is possible to salvage some of the parts for use in making repairs on other limbs of similar make, thereby saving the expense of sending them to commercial manufacturers, if there is an orthopedic shop in connection with the doctor's office or hospital.

I made a visit to Minneapolis during the summer of 1936 and while there took advantage of an opportunity of visiting the artificial limb companies to make a study of the methods used in taking measurements and making plaster paris impressions of amputation stumps, necessary in ordering.

Mr. Ray Trautman, president of the Minneapolis Artificial Limb Company, has as samples one each of the limbs made by two or three of the companies and demonstrated them for my benefit. I was permitted to spend as much time as I desired in the factory obtaining information about the manufacture of the type of limb made by this company, which is principally fiber. I saw the entire process and had it explained to me by officials of the company who also pointed out, by way of comparison, the process of making limbs by using metal instead of fiber. This was a very interesting and highly instructive experience and I feel that I benefited greatly by having spent this time in the factory. The measurements are taken by means of a tapeline, the same as would be taken for a brace to be worn on a leg or arm, by measuring both the stump of the affected limb and the good limb. Measurements of the stump and of the good limb are important as it is necessary in making the artificial limb to have it correspond in length to the normal one. Also, the circumference of the two at various levels must correspond. There is an order sheet which shows the point where these measurements should be taken and which also illustrates the application of plaster casts which is simple enough to learn after seeing them put on by experts such as they have in this factory. For below the knee amputations, it is only necessary to make the cast of the stump including the center of the knee, but for above the knee amputations it is best to extend the cast well up to the groin, getting the whole contour of the thigh.

Before putting on the plaster cast it is wise to take an indelible pencil and make a mark around each bony prominence so that each of these will be indicated on the plaster form and due allowance can be made for them in constructing the form over which the soft socket and shank are moulded. This is done by taking small bits of leather and tacking them onto the form at the proper places, producing elevating areas to represent the bony prominences. Next, watersoaked fiber, having already been cut the proper size, is applied around this form and pulled very tight, after which a heavy grass rope is wound around it and drawn very tight by a windlass which may be either hand or motor driven. After the shank is thus formed from the wet fiber, it is put in

an oven to dry and harden and is then riveted to hold it in shape. Other procedures are carried out along very much the same routine as above, each employee having his particular job to do. After all the parts are made they go to a certain bench to be assembled and the leg or arm inspected for any flaw in material or workmanship.

During the past several years I have had occasion to visit several of the factories where artificial limbs are constructed and observe the various makes of limbs as to methods of construction and materials used. All have one or more good features but I have never yet seen one which I considered as being perfect. While they are all constructed on more or less the same general principles, each one has something different which is supposed or claimed by the manufacturer to increase its efficiency over all others on the market. There are three types of material used in the fabrication of artificial limbs: wood, metal, and fiber. Wood is the material in most general use today, English willow being the most desirable for this purpose, although there are other types of wood being used. The wood is put through a process of seasoning which is intended to lessen the dangers of its splitting when used in making limbs, but this often happens with the best of care. In some of the factories a plaster cast is applied to the stump and from this is constructed an exact model of the stump and a die is cast for boring the socket in a wooden block. This is the method used in the J. E. Hanger factory at St. Louis. Others take only measurements of the stump and rim out the wood to fit the stump, making frequent try-ons and cutting out the wood to relieve pressure where indicated. I believe this method is generally used by the Kansas City firms I visited. Regardless of the method used the important thing is to fit the socket properly so the wearer has the greatest amount of comfort. I do not believe wood is the best material for use in making a socket as it is rigid, and after once being shaped cannot be reshaped to conform to changes in the contour of its stump which are bound to occur.

Metal has been tried with varying success in the manufacture of artificial limbs. It has the merit of lightness but aside from this I can see nothing to recommend it. Dural aluminum is the metal most commonly used, being fairly pliable and easily moulded into the desired shape. This feature, to my way of thinking, is an objectionable one however, since it has very little, if any more, tensile strength than tin of the same thickness, and easily loses its shape if subjected to much strain or is hit by a hard object. The upper rim of the socket is so thin that it is very easily dented or turned in, causing impingment against the soft tissues of the stump with resulting excoriations; or in case of below knee amputation, may cause locking of the joint in a faulty position as, for example, with the knee flexed, and the wearer be unable to walk until the limb is sent to the factory and reshaped or the dent removed. I have heard of just such accidents where the wearer stumbled in crossing street car or railroad tracks, striking the upper edge of socket against the steel rail. He was not able to get up without assistance. The limb had to be removed and the patient had to be helped to the factory of one of the limb manufacturers in Kansas City. Another objectionable feature about this limb is the thermal changes caused by variations in atmospheric temperature. Metal is a very efficient conductor of heat and it is not desirable to have any material of this type in close proximity to the already hypersensitive stump. This fact was recently called to my attention in the case of a patient who is wearing his first metal limb after having worn several wooden limbs previously. He

developed a severe rash on his stump during the intense hot weather during the summer and it is reported that he also suffered a great deal from the cold during the preceding winter. I considered his skin lesion as being nothing more than heat rash, since it cleared up quite readily after leaving the leg off for a few days. Aluminum being a soft metal does not hold rivets well and it is not long before parts become loose and rattle at every step. It should be mentioned here that the stump does not come in direct contact with the metal in limbs constructed of that material. Either a leather or wooden inner socket prevents contact with the metal, yet the thermal changes take place just the same.

Fiber is, I believe, the best one of the three. It may be of variable types and grades according to the material from which it was made. It can be rendered very pliable by soaking in water, when it looks and feels very much like leather. It is in this state that it is moulded, after which, as described above, it goes through a drying and hardening process. It is practically impossible to break fiber which has been given this treatment, yet it will bend and will fly back to its original shape when the pressure is released. Fiber is much lighter in comparison with wood and is far more durable. Recently a patient was examined with regard to some minor operation in his below knee amputation stump. He was wearing a fiber leg which he said he purchased in 1921. Except for some few minor repairs which he had made, such as renewal of the harness and leather straps which had worn out, he said he had not had any trouble with the leg and had never needed to have adjustments made during the period of fifteen years he had worn this leg. I was surprised to find no excoriations of the skin covering over the bony prominences around the knee joint. These are usually in evidence where a rigid socket is being worn. It often happens that the stump undergoes excessive shrinkage after the socket is fitted and it becomes necessary to put on additional stump socks. I have seen some wearers of artificial limbs put on as many as five and six of the heavy socks and still have room to spare in the socket. Reliners have been tried and found in most cases to be useless as they never seem to adjust themselves to the shape of the stump. I do not believe that the fault lies entirely in the fitting of the artificial limb. It is quite conceivable that the fitter has done his duty to the very best of his ability, but the stump has undergone further shrinkage, thus allowing the stump to sink further into the socket than intended and thereby exert pressure on the stump where pressure was not intended to be. With the soft adjustable leather socket which fits inside of the fiber shank, this can be taken care of as shrinkage occurs and, if excessive, it is a rather simple matter to take a new cast of the stump and mould an entirely new socket to fit it into the shank. The shank itself can be altered also by removing the rivets and slipping it over the cast and leather socket, repeating the original process of winding the grass rope over all or clamping it in a vise, after which the rivets are replaced to hold it in the new shape.

About a year ago, after having observed some of the difficulties experienced by the wearers of artificial limbs, particularly the below knee limbs, I began experimenting with the old legs I was able to find which had been discarded for various reasons. The worst difficulty I found in artificial limb wearers was the matter of excoriations about the knee, due to the joint being forced into the socket and excoriations resulting from pressure over the bony prominences. In attempting to devise some method of preventing this difficulty, I recalled the ex-

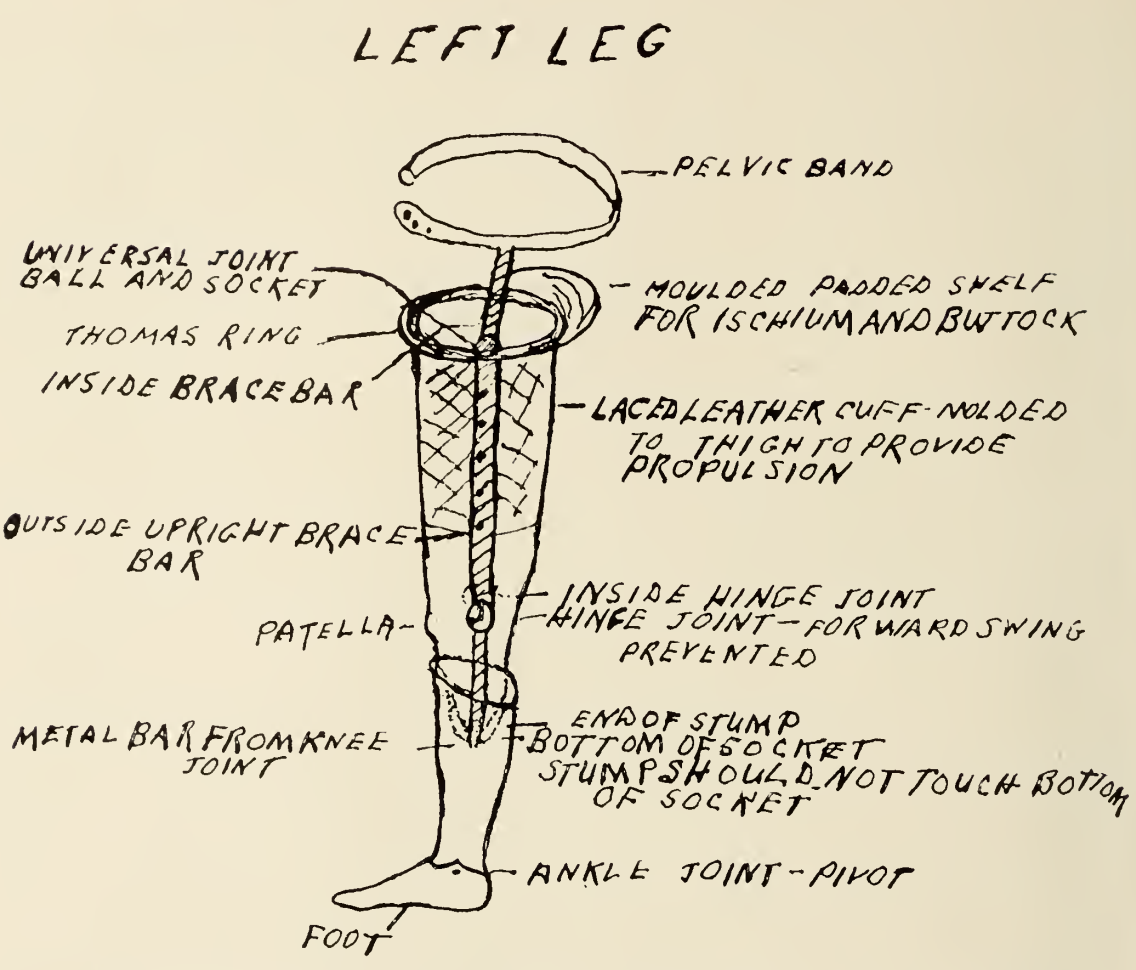



Chart 1. Diagrammatic sketch of aids to artificial limbs (J. W. Simmons). Read text for discussion.

perience gained during my services in one of the Shrine hospitals for the treatment of crippled children where I was employed some years ago. This hospital had its own brace shop where all braces were made for use of the patients both in the hospital and the out-patient clinic. Frequently a child was under treatment for a fracture of the femur or one of the bones in the lower leg where it was desirable not to have complete weightbearing on the affected bone immediately, but where it was desired to keep up motion in the joints and stimulate bone growth. The walking caliper type brace was employed with good results for this type of case, using a weightbearing ring, similiar to that known as the Thomas ring on the upper ends of the extension bars. This ring fits snugly about the ischial tuberosity which is covered by the heavy gluteal muscles and is not subjected to trauma as in the case of the bony parts about the knee joint. From time-to-time a few minor changes have been made in the original model, one being the addition of a pelvic belt, later changed to a pelvic band to overcome the tendency of the foot to rotate outward and interfere with walking. Of course, with this apparatus a hip joint had to be devised to permit the wearer to sit down without having to remove his artificial leg. The knee action may be retained since the knee is left intact and is used in locking the joint in extension. When this apparatus is used for above the knee amputation, a mechanical or automatic lock is

attached at the knee or the knee action may be controlled by an elastic webbing strap to prevent it from buckling when weight is placed on the limb and which will also kick the lower leg forward when walking. I have not had sufficient time to give this experiment a conclusive trial but so far it has worked very well and does prevent weight being borne on the bony prominences, viz., head of the fibula, tibial tubercle, and femoral condyles. The bars are measured accurately so that the stump is merely for the purpose of moving the joint in walking or when the wearer sits down.

It is not my aim in presenting this paper to pose as an expert artificial limb fitter, for I am not. My chief aim is to try to point out to the medical profession some of the shortcomings of artificial limbs and their fitting, and thereby show the urgent need of cooperation between the doctors and the artificial limb manufacturers. Too often the manufacturer is permitted to fit a limb on a stump that has not sufficiently healed and that has not been prepared, by process of shrinking, for the limb. This results in additional expense to the purchaser, lots of time from work due to avoidable injury to the stump which may result in the loss of more of the limb or even in loss of life, which occasionally occurs following reamputation of a stump. Practically every one who has obtained a medical degree and license to practice medicine and surgery has at some time or another done an amputation of a limb, but I dare say that not one in a hundred could properly fit an artificial limb to the stump of the limb he has so eagerly amputated. In my opinion, it is just as much his duty to follow the case to the final stage of supplying a proper fitting and usable prosthetic appliances as it is for him to follow up the surgical dressing of the wound following the amputation. On other words, I do not feel that his responsibility ceases to exist as soon as the wound has healed and that the fitting of a limb is the responsibility of the manufacturer. I think this is as much a part of the treatment as any other given while in the hospital or under the care of the physician. It is only by making this the doctor's responsibility that we will ever be able to perfect the use of prosthetic appliances for these unfortunate individuals who have lost a limb. If a dentist extracts teeth for a patient, he expects to replace them with some type of prosthesis, whether it be bridge work or plates; he either makes these himself or has them made under his supervision. The same is true in regard to an eye specialist who performs the eye surgery and later prescribes glasses. He either fits the glasses, making them up from parts he has in stock, or checks the lenses after delivery has been made to see if they are what he ordered and whether they are suited for correction of the patient's vision.

I do not recall ever seeing anything in literature touching on the fitting of artificial limbs and therefore can give no references. It is a subject, however, which I believe deserves consideration and I hope that this paper may do some good in the way of stimulating those who may chance to read it, to pay a little more attention to the artificial limb question in the future than they have in the past.

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### NURSES HANDLING STREPTOMYCIN MAY DEVELOP SENSITIVITY TO DRUG

Nurses, pharmacists, laboratory technicians and others concerned with the administration or handling of streptomycin are in danger of developing a sensitivity to the drug, three doctors state in the February 28 issue of *The Journal of the American Medical Association*.

The writers are Solomon M. Rauchwerger, M.D., Frederick A. Erskine, M.D., and Walter L. Nalls, M.D., from the Department of Medicine and Surgery, Veterans Administration, Oteen, N. C. They report that when over a period of 20 months streptomycin was administered to 233 patients in the tuberculosis hospital at Oteen, N. C., six nurses developed such a sensitivity. In every case the first symptom was a rash on the hands, followed by intense itching. Five of the six nurses also showed involvement of the area around the eye socket. Pyribenzamine proved more effective than benadryl for relief of symptoms.

# THE USE OF NOVOCAIN AND OIL IN THE TREATMENT OF LOW BACK INJURIES

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In this article I will discuss only the traumatic type of low back pain that is produced by some awkward step or strain, or occurs while lifting some heavy object in a strained position, or by wrenching the back in an accident.

This strain or sprain is produced by too much tension or pull on the ligaments and muscles about the lumbar and lumbosacral articulations, resulting in tears in and about the origin and insertion of these muscles and ligaments. These changes or injuries are similar, according to authorities on the subject, to those seen about a sprained ankle, but are too deeply situated in the back to be visualized.

The symptoms produced by this injury present the same picture, usually coming on suddenly, with a sharp, nauseating pain that "feels like something tore loose in the back". This is followed by soreness and splinting of the back with pain on the slightest movement. This soreness and pain will become more pronounced as time passes, and soon the patient will be unable to move without the most excruciating pain. Often the pain will be radiated along the course of the great sciatic nerve, and occasionally along the distribution of the pudendal plexus.

In diagnosing this condition the history of the injury, the sudden onset, and symptoms of the patient are usually sufficient. X-ray examinations must be made to rule out fracture of any part.

Examination reveals little, other than changes of posture. The patient will usually lean forward and to one side, favoring the damage. Difficulty of walking will be noted, with splinting of the high and dragging of the leg on the affected side. Spasm of the lumbar muscles on the affected side, with tenderness to deep pressure over the site of injury, is a rather constant finding and important in determining if the treatment outlined here will be of value.

Treatment of the condition is carried out by injection of 6 to 10 c.c. of 1 per cent novocain in oil in the sacral canal. The pain is relieved by this mild anesthesia, the patient remains ambulatory and is given a series of exercises which restore the injured area to normal function without delay.

Details of the injection and exercises are as follows: The patient is placed on the treatment table lying on his face, and as relaxed as possible. The site of injection is prepared by proper applications of antiseptics and drapes. The skin and subcutaneous tissue over the hiatus of the sacral canal is anesthetized with aqueous 1 per cent novocain solution and a small amount of the solution is injected low in the sacral canal, to prevent pain on insertion of the special caudal needle which was designed for caudal anesthesia in obstetrics. After the canal is entered, the needle is inserted its full length, approximately 2½ inches, and suction is made to determine if the spinal canal or blood vessel has been entered. A small piece of rubber tubing, which is also used with the caudal set, is used as an adapter between the needle and the Luer syringe and 3 to 5 c.c. of trithesia are injected slowly into the canal. Rapid injection will cause considerable pain. The needle is withdrawn about one inch and suction is made again for blood or spinal fluid and 3 to 5 c.c. more are injected. The needle is withdrawn and ad-

Read before the South Georgia Medical Society November, 1947; also case reports of similar treatments were presented before the Eighth District Medical Society, October, 1945.

hesive tape patch is placed over the needle puncture. The patient is allowed to remain still for a few minutes until the dizziness, often associated with caudal injection, wears off. The patient is then helped to his feet. Occasionally he will have a numbness of the feet and legs which will last for several hours. Some patients have sufficient motor disturbance to make walking difficult for several hours. The patient is now guided through every movement of the spine. Holding the hands on the hips, the patient bends in a circular movement around the spine, swaying the hips and making use of the spine in every way possible and to its full limits; bending over to the front, then to the right, then to the left and backward. Tenderness will be felt as the muscles and ligaments of the injured area are used. This tender or sore area will become less and less noticeable and will gradually disappear. During the next few days the exercises are continued and light work is permitted.

*Discussion and Reasons for This Form of Treatment*

In searching the literature, both past and present, the proper and accepted form of treatment of this type of patient will be rest on a hard bed, adequate sedation, heat and adhesive strapping over the back muscles.

For further information on the present form of treatment, let me give you part of a recent article published by the Alton Ochsner Medical Foundation: "Recumbency should be continued for one to three weeks or until localized tenderness has disappeared and turning movements do not cause pain. Gradually, the patient may be allowed to sit, stand and walk for short intervals, with the protection of a wide belt or adhesive strapping. Heat and massage are helpful at this stage. If the patient is reasonably active after four to six weeks, postural exercises and stretching movements should be carried out for two or four weeks before he resumes heavy work of any kind. The most frequent error in treatment of this group of cases is failure to insist upon absolute bed rest in the recumbent position for long enough period.Sitting in bed, standing or walking in the early stages of healing aggravate the condition and continued activity tends to produce chronic swelling and fibrosis with symptoms characteristic of chronic low back strains".

Some time in 1932 the necessity for treatment other than the above was forced upon me. A patient, who had been suffering for several weeks with a severe sciatica, was dragged into my office. He had been told that he would have to go to a specialist in a distant city to have a sciatic nerve injection, so before taking the trip the family decided to give me a trial. I had recently read an article in *The Journal of the American Medical Association* describing the treatment of sciatica by the use of novocain and saline solution injected into the sacral canal. I told the family that I could make the injection. After careful preparation and considerable effort, I managed to locate the sacral canal and successfully made the injection. To my surprise, the patient was soon able to walk and was relieved of his pain and made an uneventful recovery.

Since this first patient in 1932, I have treated many patients, and within the last seven years I have been using novocain with oil instead of novocain and saline solution. The decision to use novocain in oil was made after noting that the effect of the novocain and saline subsided too soon. Many cases did not respond from the exersises that were forced during the mild anesthesia and as soon as the anesthesia had subsided the pain was as severe as ever, but when 1 per cent novocain in oil was used the anesthesia was prolonged and

the patient would be free of pain for several days.

It was found that this period of function immediately following the injury, or any time following the injury, was not detrimental but apparently the causative factor in returning the injured joint to normal. While under the influence of an anesthetic agent so mild not to be noticed, the patient works out the spasm, prevents adhesions, and maintains normal function until the injury can heal. Theoretically this is the same as the treatment used in the injection of a sprained ankle.

The injections are given from five to seven days apart, and in no case will more than three injections be needed. Should the patient fail to recover after three injections are given, the patient is referred to a neurosurgeon for further study. In my files there are records of patients who were absolutely bed-ridden, some for a few days, others for weeks. The treatment for the old or new case has been the same. All have responded except five and they were referred to the neurosurgeon and were later operated on for ruptured nucleus pulposus.

I have made no effort to treat by this method any injury above the lumbosacral articulations, unless the pain radiates along the course of the great sciatic nerve, or down the leg or around the hip joint.

I have no way to determine the possibility of after-effects from this treatment, other than time. More than seven years have passed since I treated my first patient with Breon's thrithesia, and to date no undesirable end results have been noted.

### *Conclusions*

It is my opinion, gathered from experience, that trithesia injected into the sacral canal will relieve the pain and discomfort produced by low back injury, and that during the period of anesthesia the injured muscles and ligaments heal and return to normal within a very short period of time and with a minimum amount of complications.

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# NEWER CONCEPTS IN THE TREATMENT OF CIRRHOSIS OF THE LIVER

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*Atlanta*

This presentation is a brief discussion of some of the more recent concepts in the prevention and treatment of cirrhosis of the liver. It is not intended to be a comprehensive review of causative factors, symptomatology, pathology, or diagnosis of this disease.

Since the days of Claude Bernard, who first demonstrated the presence of glycogen in the liver, physiologists have repeatedly pointed out that this organ is truly unique because of its simplicity of structure but extremely complex function. The multiplicity of its duties explains the varied and sometimes bizarre symptomatology which liver disease presents. Its tremendous functional reserve and regenerative capacity frequently modifies its response to disease processes.

The word cirrhosis comes from the Greek stem meaning orange yellow, having been suggested by the appearance of the cut surface of cirrhotic liver, in which there is a greater than normal content of fibrous tissue, giving the lighter color. We now know that prior to the degenerative fibrotic phase there is an earlier stage in which excessive fatty infiltration is present. This abnormal accumulation of fat in the liver

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cell leads to hyaline and fatty degeneration, beginning at the periphery of the lobule. Then comes fibroplastic proliferation followed by pressure atrophy, with the liver attempting to compensate by regeneration and the formation of irregular new lobules. We now have the familiar pattern of portal venous obstruction, the formation of new collateral venous channels as esophageal varices and hemorrhoids, progressive liver insufficiency, ascites and ultimately death.

As late as 1940 textbooks of medicine stated that "In spite of attempts in recent years to explain portal cirrhosis on another basis, very strong clinical opinion still points to alcohol." Since 1943 it has become increasingly apparent to numerous investigators that the pathogenesis of liver cirrhosis is intimately concerned with nutritional deficiencies. Today we recognize that although alcoholism may be found in a large percentage of cases, nutritional deficiencies[1] are the basis for the majority of these changes. The dietary habits of the chronic alcoholic are notoriously bad; the diet is inadequate in both quality and quantity of many essential food factors, particularly protein and the vitamin B complex. Also, whereas in the experimental animal alcohol ingestion alone will not produce cirrhosis, yet it will result from deprivation of certain amino acids and vitamins[2].

Although cirrhosis of the liver may occur in association with many factors which are hepatotoxic, such as chemical poisons, syphilis, a variety of systemic diseases, hyperthryoidism and the toxemias of pregnancy, the preponderance of experimental studies support the view that it is difficult to produce permanent and severe damage to the parenchyma except when the liver is in an abnormal state. This abnormal state is assumed to be due to the poor nutrition of the organ.

In general, biliary cirrhosis is thought to be a surgical condition resulting from biliary obstruction. However, in spite of the fact there still exists much difference of opinion among clinicians with respect to essential details, studies of this process have shown that it can be placed on the same nutritional basis as portal cirrhosis. In biliary cirrhosis nutritional deficiency results from the inability of the liver cells to properly utilize and store the vitamins and foodstuffs presented them by the portal blood stream.

The liver offers not only a storage for glycogen, but also acts as a depot for fat, situated as a halfway station between the intestinal tract and the various fat deposits of the body. Fatty livers may be the result of either an increased supply or a decreased deposition of fat. High fat diets are common causes of an excessive supply to the liver. Disease states usually affect the rate of removal of fat. The protective action of glycogen against toxic substances is largely lost if excessive amounts of fatty acids are present. Reduction in protein intake also makes the liver more susceptible to injury. Dietary factors other than the metabolism and storage of carbohydrate, fat and protein also are necessary for the proper function of the liver. Various vitamin deficiencies can produce disease processes in the liver[3].

In the early work with experimental diabetes it was noted that depancreatized dogs maintained on adequate doses of insulin, nevertheless soon developed a large fatty liver. This could be prevented by the addition of raw beef panereas to the diet. Subsequently this protective action was shown to be due to a phospholipid, lecithin. Further work showed that a part of the lecithin molecule was responsible for its action. This active constituent is choline[4]. The lipotrophic action of choline is believed to be due to its role in the formation of phos-

pholipids from neutral fat deposited in the liver. Phospholipids, in loose combination with protein, are the form in which fat is transported from the liver to the tissue for utilization or storage.

It has also been noted that the ingestion of methionine, one of the essential amino acids, will act similarly to choline[5]. This is easily understood since methionine is used in the synthesis of choline by the liver. Diets lacking in these two lipotrophic substances, choline and methionine, produce fatty infiltration. The administration of either or both of these materials will not only correct this condition but will act to prevent it.

Many cases of both alcoholic and non-alcoholic cirrhosis have frank clinical evidence of vitamin B complex deficiencies. Nutritious diets supplemented with vitamin B concentrates have been used with favorable results[6]. The diets used contained from 2500 to 3500 calories per day and were high carbohydrate, high protein, low fat. They consisted largely of meat, milk, eggs, fruit and green vegetables. Brewers' yeast or vitamin B concentrates were given by mouth, with the intramuscular injection of thiamin chloride and crude liver extract. In cases with ascites, salt and fluid intakes were restricted. With dietary treatment, the best results were obtained in patients with the early phase of the disease, before the onset of ascites and advanced liver deficiency.

Since the lesion produced in experimental animals by diets deficient in lipotrophic substances (choline and methionine) closely resembled liver cirrhosis in man, it was hoped that the disease might respond to their administration[7]. Treatment consists of administration of choline chloride in doses of 1 to 3 Gm. daily, prescribed diets as given above, and supplements of vitamins A, D, and B complex. Large amounts of skim milk are given, since the milk protein casein contains significant amounts of methionine. Some men have had considerable success in preventing and treating liver damage by the use of methionine alone[8], or by the use of casein hydrolysate which contains methionine.

In a representative series of 28 cases[7] the results were: 5 were terminal cases that died within twelve days; 2 others died within six weeks. Of the remaining 21: 2 were cases without ascites and responded favorably by showing no further progression of the disease; 6 cases with ascites were completely relieved and remained free during the period of observation of three months to two years. Varying degrees of improvement were seen in the rest of the series. Two cases failed to respond favorably. In this particular series, amounts of choline as high as 6 Gm. were given in some cases without untoward effects.

It is apparent that the prognosis of liver cirrhosis is not as hopeless as in the past. In general, those cases with early disease and extensive fatty change respond most favorably. The chief difficulty in this stage is diagnosis; another important feature is cooperation on the part of the patient. The nutritional treatment of cirrhosis demands intelligent, patient nursing care. Most cirrhotics have poor appetites and an aversion for food. The consumption of a full diet presents a real problem and the presence of ascites further increases discomfort and adds mechanical interference with the gastro-intestinal tract. For this reason paracenteses should be performed and diuretics given, if the latter are well tolerated. We must also remember that concurrently with cirrhosis the patient may present an acute vitamin deficiency with encephalopathy. It is imperative to institute immediate parenteral vitamin therapy in large doses, while caring for the underlying cirrhosis.

Two surgical procedures commend themselves briefly to our attention. First, needle biopsy of the liver[9-10] will help to establish a definite diagnosis in cases of liver enlargement and suspected early cirrhosis. The needle is inserted into the liver anteriorly beneath the right costal margin, and the small core of liver tissue thus obtained is fixed, sectioned and stained as ordinary specimens. In cases of cirrhosis, the pathologic process may be demonstrated in a high percentage of cases. The disadvantage of the procedure is the risk of hemorrhage. Needle biopsy should be reserved for enlarged livers only.

Second of the surgical procedures is the treatment of portal venous obstruction. In this the portal vein is anastomosed to the vena cava, thus relieving the portal hypertension which has been produced by obstruction of the hepatic venous tree by excessive fibrous tissue. Anastomoses are performed in two ways: one utilizes the splenic vein and left renal vein, requiring both splenectomy and nephrectomy; the other joins the portal vein and vena cava by the vitallium tube non-suture technic. While these procedures give dramatic relief in a number of cases, they are frequently doomed to disappointment because of thrombosis of the shunt, with reappearance of symptoms and a rapid and fatal progression.

We may say in summary that clinical observations as well as experimental data suggest that human cirrhosis is primarily a nutritional disease characterized by numerous vitamin deficiencies. Early fat deposition in the liver is accompanied by anorexia which produces a cycle of increasingly severe malnutrition. Inadequate intake of protein and vitamin B complex leads to further hepatic damage, and renders the liver more susceptible to toxic damage.

If liver fat can be mobilized and further deposit prevented, there is sufficient improvement in the patient's appetite to permit correction of the dietary defects. Choline, methionine and a low fat diet can accomplish this.

A plea is made for the early diagnosis of cirrhosis, as these patients benefit to the greatest extent from therapy. Moribund patients with profound liver destruction and the classical signs of cirrhosis are obviously beyond the help of any conceivable therapeutic regimen.

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## SMALLPOX VACCINATION

Smallpox can be virtually wiped out in this country if every child is successfully vaccinated against this disease before reaching his first birthday, revaccinated when he enters school and every three years thereafter, according to medical doctors in Michigan.

The most important fact for parents to remember, doctors point out, is that the smallpox vaccination should be given during infancy to insure the greatest protection. Postponing the vaccination until school age may make the difference between life and death for the child. Even if the disease did not prove fatal, it would scar the child for life and possibly leave him blind.

Michigan doctors of medicine with state and county health departments are now engaged in a campaign aimed at eventual eradication of smallpox and the other severe diseases of whooping cough, diphtheria and tetanus (lockjaw). This campaign is designed to reach every child in the state regardless of economic status or distance from a doctor's office.

Vaccines and toxoids used against these diseases are being supplied from state laboratories to doctors and medical societies. In turn, these vaccines and toxoids are available for immunizing all children whose parents approve.

# PIGMENTED LESIONS OF THE EYE AND ADNEXAE

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The purpose of this report is to review some of the present day ophthalmologic concepts regarding the diagnosis and management of various pigmented conditions involving the eyes and adnexae, with the hope of simplifying their general understanding. A report of this kind must, of necessity, emphasize pigmented tumors, since their early recognition and treatment are so important.

In the ocular conjunctiva, pigmentation occurs normally and pathologically in the same manner as in the skin. The deep basal epithelial cells at the limbus and over the caruncle have been shown to be potential melanoblasts, or cells which synthesize melanin, thus corresponding to the deep cells of Langerhans, which are the chromogenic cells in the skin. This property may have some determining influence on the frequency of malignant neoplasms at the limbus and caruncle. In the white races, pigment in the conjunctiva is normally absent except in the basal cells at the limbus; in the dark races it is more diffusely present in the basal cells of the epithelium and also occurs in the loose episcleral tissue (Duke-Elder).

In the discussion of some of the more important pigmented conditions of the eye I would like to take up first *congenital melanosis* of the conjunctiva, or congenital pigment flecks of the conjunctiva. In this common condition there is a localized area of pigmentation in the conjunctiva, usually at the limbus, which is present at or soon after birth, and which undergoes no change throughout life, thus corresponding to the ordinary pigment spots in the skin. The lesion is flat and the pigment characteristically very black. Histologically the condition consists of pigmentation of the basal epithelial layers in an otherwise normal epithelium. Malignant changes in such a condition are extremely rare but have been reported (Loehlin). For cosmetic purposes they may be excised with impunity.

*Benign papillomas* of the conjunctiva are not uncommon and, when occurring at the limbus in potential pigment-bearing tissue, are prone to become pigmented. The lesion is pedunculated and has a strawberry surface, readily distinguishing it from more serious malignant conditions. A malignant transformation of the tumor may occur, of course. Ordinarily, the tumor may be excised locally, but is also quite radiosensitive.

It is well known that tissues may undergo certain changes prior to the development of a malignant growth. In the skin one of the rarer manifestations of this is an acquired diffuse melanosis which usually has a predilection for the face and which invariably develops into a diffuse malignant melanoma. In the conjunctiva a similar precancerous melanosis may occur and be the forerunner of a diffuse malignant melanoma (Reese).

This *precancerous melanosis* is an *acquired* condition, and thus bears no relation to congenital pigment flecks. The average age at which the condition first appears is 40 to 50 years, and the malignant changes occur *ab initio* or within five years. The lesions are multiple, flat, light brown in color, and involve bulbar and palpebral conjunctiva and skin. Malignant changes seem to occur simultaneously in many foci. Rarely is local tumor formation present and death from metastases may result without

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local tumor formation. The malignant melanoma developing from these lesions is histologically different from the usual malignant melanoma of the conjunctiva. The lesions are radiosensitive in the early stages only. Because of the diffuse conjunctival involvement, exenteration of the orbit, conjunctiva and lids is necessary.

A *nevus* of the conjunctiva or lid margin corresponds exactly to the common nevus (or mole) of the skin. It is a congenital tumor although it may not be noticed until it acquires pigment, which usually occurs at about puberty. The apparent acquisition, or increase in size, of a nevus is most often due to the increase in the pigment content of a pre-existing nevus, due to the oxidation of pre-melanin into visible melanin. Clinically a nevus has a slightly raised, irregular surface, in contrast to flat congenital pigment flecks. It is now generally agreed that a nevus is neuroectodermal in origin, being derived from the end-apparatus of sensory nerves. It has a characteristics microscopic appearance, is a benign neoplasm showing slow growth and sometimes eventual atrophy. Ordinarily, a nevus needs no treatment as long as it remains stationary. It is radioresistant but may be safely excised locally for cosmetic purposes. Occasionally a sudden stimulus to rapid growth occurs and a highly malignant tumor may occur which differs histologically from other types of malignant melanoma at the limbus.

In the literature of malignant epibulbar tumors there is a great diversity of nomenclature. The origin of these tumors is frequently difficult to prove. Different terms are used to describe the same neoplasms. There is considerable variation in cell type in different tumors and even in the same tumor. Thus we find the terms nevocarcinoma, malignant nevus, melanocarcinoma and melanosarcoma. Ophthalmic pathologists, while recognizing that true sarcomas in the epibulbar region do rarely occur, use the term *malignant malanoma* of the *conjunctiva* to describe all other malignant pigmented tumors arising in the limbal region. Thus they may be either epithelial in origin as in precancerous melanosis, or neuroectodermal in origin as from a nevus, or mesodermal in origin, probably from the mesodermal melanoblasts, or may simply represent an extension through the sclera of a malignant melanoma of the ciliary body. Histologically they may all resemble the ordinary malignant melanoma of the choroid, to be discussed later, but usually have certain distinguishing histologic characteristics.

A striking manifestation of the great variation in the degree of pigmentation that may occur in the uveal tract is seen in the condition known as *melanosis oculi*. This is a congenital malformation in which there is an overabundance of normal pigment formation. It usually occurs in highly pigmented persons, is unilateral and stationary. Histologically there is a great increase in the number and pigment content of the mesodermal chromatophores, not only in the uvea but also optic nerve, sclera, subconjunctiva, subcutaneous tissues and even hard palate. The conjunctiva is noticeably uninvolved, in contrast to precancerous melanosis; for instance, 25 per cent of the cases in the literature have developed malignant melanoma of the uveal tract, but this figure may be misleading since in most cases the eye is normal, only rarely produces complications and is then not frequently obtained for histologic examination except when it develops a tumor.

What the ophthalmologist speaks of as *benign melanoma* of the *choroid* and *benign melanoma* of the *iris* is a congenital, localized collection of chromatophores which usually remains stationary throughout life and has a very characteristic clinical pic-

ture. These lesions may be derived from mesodermal melanoblasts, which are not present anywhere else in the body except at the Mongolian spot and in the rare extrasacral Mongolian spot or so-called "blue nevus". There is good recent evidence that they may also be derived from the end-apparatus of the choroidal nerves and sheath of Schwann cells and therefore are really nevi and neuroectodermal in origin. They should be periodically examined and measured because they can give rise to malignant melanoma.

The well-known *malignant melanoma* of the choroid, iris or ciliary body, was in the past called melanosarcoma, mainly from its cellular structure. It is now realized that the tumor is really neuroectodermal in origin and is allied to neurofibroma. It has been known to arise from a pre-existing benign melonoma. The tumor is completely radioresistant. The prognosis for life depends largely upon the cell type and reticulum content. In the early stages simple enucleation usually effects a cure.

In summary, it may be generally stated that in early life the acquisition of an area of pigmentation in the conjunctiva, or the increase in size of such an area, does not necessarily connote serious trouble. On the contrary, in adult life the acquisition or growth of a pigmented area may mean a malignant change in the conjunctiva. I believe that rational therapy can be employed only after proper histologic study of the lesion, and recommend complete local excision for this purpose where possible.

HEALTHGRAM

Preventive medicine requires not only the cooperation, consent, and understanding of the individual who is to be benefited; oftentimes he must take the initiative—he must realize that it is just as important to seek advice from his physician on how to keep well as it is to call upon the physician for help when illness strikes. Med. in the Changing Order, Rep. N. Y. Acad. Med. Comm., Commonwealth Fund, 1947.

# NATURE'S DISTURBANCES AND CURES IN OPHTHALMOLOGY

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Men of medicine: to quote the Bard of Avon, "You who have studied physic have been made familiar with the disturbances that nature works and of her cures; which doth give more content in course of true delight than to be thirsty after tottering honor or to tie up treasure in silken bags to please the fool and death.

"For virtue and skill are endowments greater than nobleness and riches; careless heirs may the two latter darken and expend. But immortality attends the former making a man a god."

Yet, to obtain this immortality in his chosen field the ophthalmologist must be a student of nature's disturbances. Nor should he be deluded into accepting blindly the egoistic empirical dictum of some so-called authority, for he physics the human seeing machine and seeing affects the nervous muscular tension of every organ and tissue of the body, imposing penalties on efficiency, health and general well-being.

Seeing is sight plus light; without light there is no sight. Light, the source of practically all energy, is the fastest thing in the universe. In fact, the universe is but a mighty keyboard of electrical elements upon which some incomprehensible power plays a universal symphony; the notes, pitch and key being the frequencies of vibration. When the frequency is doubled it is an octave, from do to do.

The ten octaves in the extreme treble of this universal keyboard we call light; two octaves of invisible ultraviolet rays, one octave of visible rays and seven octaves

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of invisible infrared rays.

The light best for our eyes is that of day; however, if the sunbeam be refracted into the colors of the rainbow, the color affording greatest visibility is yellow-green, giving twice that of blue-green and ten times that of either blue or red. Yellow-green causes least eye-fatigue, though this increases rapidly towards the blue-violet and is intensified towards the ultraviolet.

The spectrum of daylight, though rich in yellow-green, falls off rapidly from blue-violet towards ultraviolet and at less than half way into the first octave of the ultraviolet, ends abruptly.

With vegetation as a screen, no harm can come to the eyes from the ultraviolet of day, but this is not true of light from vacuum tubes, electrically conducting gases, electric spark, arc flame or mercury arc which as a rule are rich in violet and ultraviolet radiation and improperly screened fatiguing and injurious to the eyes, as their illumination depends on the kinetic energy of colliding electrons, and differs from light sources merely heated to incandescence.

Ives has shown that light from incandescent solids, whatever the degree of temperature, is pleasing and comfortable to the eyes, and from the time of the primitive cave-man a glowing incandescence, rich in the longer wave lengths of yellow and red, has always been associated with good cheer, stimulating the emotional reactions of happiness, gaiety and a love of life; whereas the fluorescence of colliding electrons, usually richer in the shorter wave lengths of blue violet, have as their associated emotions sadness, sentimentality and depression.

Most of the eye fatigue, strain and disorders caused by some illuminants may usually be traced to an excess of these shorter waves; even though the light be white, mere whiteness has little to do with its being pleasing or agreeable; it may be harsh and disagreeable.

Although wave length and color of light play a major role in eye comfort and fatigue, it is not more important than intensity of illumination. The human eye can read twelve point type by the light of the full moon, can read the same type in sunlight one million times stronger, a marvelous range accomplished by two kinds of vision; rod vision for twilight, cone vision for daylight; rod vision comparable to a party line telephone, cone vision to a straight line: rod vision though more sensitive to light gives low visual acuity, whereas cone vision though less sensitive to light has an exceptionally high visual acuity.

With sufficient illumination we use only cone vision, yet we force our eyes to use the nervewracking party lines when with a little more illumination the straight line comfortable cone vision could be obtained.

Practically the entire area of man's cup-shaped retina gives only blurred rod vision and acts as a range finder for a dimple, lined with cones, in the center of the cup. This bouquet of cones, subtending 48′ of visual field, scarcely 1/240 of an inch, is our whole dependence for distinct vision, the ability to distinguish pattern in space, yet this infinitesimal dimple in each retina, stabs out into space, aimed by ocular muscles to scan the visual field with jumps of the eye, and in outdoor daylight, like a two-gun man firing simultaneously with both hands makes a double bull's eye forty-eight times a second, though at twenty feet the target is scarcely two and one-half inches.

It's the bouquet of cones in the dimple we use for all visual tasks, that transforms the sombre gray of black and white into the vivid colors of the rainbow, that distinguishes pattern in space, that forewarns in time of impending danger; yet man's

dimple is probably degenerating, certainly it is shallow and concave. Were this to progress man would become more and more nocturnal and his vision more and more blurred.

Dimple vision is cone vision and cone vision is stimulated and activated by high illumination. Outdoor daylight uses only cone vision; high illumination and outdoor daylight seem to sharpen vision.

The eagle, his eyes activated by sunshine, has exceptional visual acuity; his cone vision stabs out into space in four prongs, like four searchlights scanning the visual field, enabling apparent recklessness without danger. Already domestication has degenerated the dimple of the chicken and pigeon; man would seem to be foolish to risk further impairment of dimple vision by making his eyes more and more sensitive to light with dark glasses, tinted lenses, dim lights and poor illumination stimulating rod vision, eventually his dimple may degenerate, his vision becoming more and more blurred, like a bull-frog who cannot see the difference between a bug and a buckshot.

In order to protect our distinct vision the mechanics of sight is important, for seeing is not continuous though it seems so. Actually the eyes jump and a visual sensation is an impression followed by fatigue, a wave-like sequence, the eyes jumping right, left, up, down, jump together, jump apart taking impressions or pictures similar to those of a movie camera.

But the camera does not jump; it has a wide field of distinct vision and is given sufficient distance to encompass the whole field in one impression, whereas the total area distinctly seen by the eyes in one impression at ten inches is scarcely 1/12 of one inch. To read or work at close range forces the eyes into a fantastic dance, and the closer the visual task the sooner will the eyes be crippled.

Another penalty of eyestrain and fatigue is imposed by insufficient illumination; for comfortable sight requires adequate light. In very low illumination a visual picture may require many seconds or even minutes to reach full value whereas in diffused daylight this may be accomplished in 1/50 of a second. The most comfortable vision, diffused daylight, affords 36 to 50 visual sensations per second.

And whenever attention is held to a visual task in poor illumination or visibility, automatically every nerve and muscle of the body is tensed: for instance, driving an automobile is usually a relaxation but as visibility is lowered, the hands grip the steering wheel tighter and tighter, and the feet press the floor-board harder and harder.

In poor illumination a visual sensation may require many seconds or even minutes to reach full value, yet a driver speeding his automobile at night may see only the persistent after image of a visual impression taken seconds or minutes before. A crash takes only a split second.

In poor illumination, with attention held to a visual task nervous tension increases as illumination decreases in intensity and evenness of distribution. Reading at night under faulty illumination is no relaxation and forcing children to use their eyes at night under the worst artificial conditions, the more home work they have and the poorer the light, the sooner will their eyes be crippled.

Visual conservation or prophylaxis is primarily a prevention of crippling, to avoid the necessity of fitting a crutch to the cripple. As a rule crippled eyes are the result of our artificial environment, for when a child is born he can see with his eyes, but cannot walk with his legs, yet at maturity his legs need no crutch though his eyes are probably crippled.

Were this reversed and the same proportion of legs crippled the majority of people on the streets would limp, walk on crutches, or sit in rolling chairs, and the call of the wolf would be transformed into a wave of your crutch as she limped along.

So, for the protection of our greatest natural endowment, vision, let us as the word physician implies, be students of nature, and let the prayer of the eye physician be: Father, please accept what we can do for Your other children, these human seeing machines, as the only return we can make for the joy of seeing Your handiwork, from the glory of the sun-lit earth to the star-lit firmament on high.

## THE HOW AND WHY OF VISUAL TESTS

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Our county health officer expressed the opinion that in checking school children more information should be obtained in regard to their visual ability. This paper is a response to that expression of interest.

As a preliminary to visual acuity tests it is well to notice the following:

1. By diffuse (or day) light the presence of external eye disease is noted.

2. By the use of light focused with a condensing lens and a loupe for magnification, greater detail can be seen and corneal opacities become more readily apparent.

3. The position on the cornea of the light reflex while the patient looks at a distant object, and again when he looks at the ophthalmoscopic light held some 14 inches from the nose, will readily show any lack of alignment of the two eyes.

4. The ophthalmoscope placed before the examiner's eye with zero lens in the aperture at 18-24 inches from the patient's eye should show a clean clear red reflex; if it does not, further examination will show the presence of: (a) Corneal opacity or foreign body which are focused with a plus 16 lens; (b) lens opacity, congenital or acquired, will be focused with a plus 10 lens; (c) vitreous or aqueous clouding or opacities are usually inflammatory but tumor reaction must be kept in mind. The contents of the vitreous are focused with a plus 1 to a plus 10 lens from behind foreward.

With the zero lens in the aperture, one rides the beam down and views the fundus. Choroiditis, macula or otherwise, and other fundal lesions are quite readily recognized when present, but obviously will not be seen unless one looks at the fundus.

Coming now to visual acuity: Let us briefly review the preschool age. At birth and until 16 weeks the macula is undeveloped anatomically. Physiologically the eye does not attain full development until 6 to 11 years. At birth the child has peripheral vision only. Light and movement are perceived. At 6 months a vision of 20/1000 is estimated, at 9 months 20/250, at 2 years 20/40, at 3 years 20/30, at 4 years 20/20. At 4 years only 20 per cent have 20/20 vision and at 12 years 60 per cent have 20/20. Vision being dependent upon both physical reception and transmission of a clear stimulus and upon mental recognition and interpretation of the stimulus, it follows that development of visual acuity in each eye and fusion of the two images into one. A physiomental process will develop earlier in some, later in other; also more perfectly in some, less perfectly or not at all in others. This type of variation must be kept in mind and allowed for in interpret-

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ing findings.

Before the development of the macula the two eyes move to a large extent independently of one another. At 6 months the two eyes fix the same object at the same time, and by 12 months a considerable effort will be exerted to maintain single binocular vision. At 4 to 6 months the colors red and yellow seem to be preferred, indicating the commencement of color vision.

The eyes develop with usage. If for any reason usage is interfered with during the developmental stage, development stops in that eye. It has been found that if an eye is prevented from seeing for the first 4 years of life by a fairly complete congenital cataract or otherwise, in the vast majority of cases that eye will never develop useful vision.

If one eye sends a clear image impression to the brain and the other sends a blurred imagine impression, the brain refuses to accept the two as the same; fusion fails and diplopia occurs. To avoid the diplopia the person, and especially the child, readily learns to suppress the blurred image and to ignore it. In order to facilitate this suppression the eye is frequently turned away from the object observed by the other. Squint is then readily recognized objectively.

Unfortunately all suppressed eyes do not turn and are not so readily recognized. If suppression occurs during 1 to 9 years of age, development stops in that eye; the visual acuity decreases. Unless the suppression is corrected before the age of development is passed, the condition becomes permanent and that person goes through life with impaired vision in that eye, doing his seeing with one eye, losing the advantage of binocular fusion and depth perception. After the age of development it is doubtfully possible, certainly extremely difficult, to acquire these valuable assets.

Since it is of prime importance that children's two eyes should maintain equality of vision, they should be checked regularly to determine that they are seeing equally and reasonably normally. These routine checks should be done by the family doctor, the pediatrician, or the health officer. For very small children, one tests the child's ability to pick up, with one eye covered, such things as marbles, peas, confetti, grains of rice and hominy grits. The exact size and exact distance is not as important as the equality of ability between the two eyes. Any person accustomed to dealing with children soon develops his own object, size, distances and recognizes normal from greatly impaired vision of the younger ages with very little if any loss of time in the examination. Remembering to check all children regularly is the thing.

Illiterate E charts become usable at 3 to 4 years. The person shows his ability to see the details of the E indicated by pointing with the arm the direction that the 3 legs of the E point. It is surprising to notice how accurately small differences in vision between the two eyes can be demonstrated in this way, especially in a child who is having one eye or the other occluded constantly. The National Society for Prevention of Blindness is on record as preferring the E chart for routine examination of preschool children.

We now come to the point when the regular Snellen test type may be used to determine the visual ability. Snellen letters are of such a size that at the distances designated on the chart they subtend an angle of 5 minutes at the nodal point of the eye. Each of the component parts of the letters subtend 1 minute. The projection on the retina of the 1 minute angle at the nodal point corresponds to a blur circle of 0.0048

mm., which Gulstrand estimated corresponds to the area occupied by 3 cones in the macula region. One cone theoretically subtends an angle of 19 seconds. The normal eye will determine the Snellen letters at the distances designated. Some persons with normal eyes will recognize these letters at a greater distance and other persons less accustomed to this type of mental gymnastics will have difficulty in reading 20/20. We record vision by a fraction, the numerator of which is the distance of the eye from the test letter and the denominator is the distance at which the smallest recognizable letters should be read.

People may be divided into 3 groups by the use of the Snellen chart: 1. Persons with visual acuity of less than 20/20 due to refractive error. These will be found to have myopia or myopic astigmatism or high grade hyperopia or hyperopic astigmatism. Lesser degrees of ametropia will give greater visual loss as accommodative power decreases and the presbyopic age approaches. The general practitioner or public health man does not need to determine whether a patient has hyeropia or hyperopic astigmatism. To him it does not matter. The eye makes the same type of adjustment to focus the hyperopic errors, be they spherical or astigmatic. Refraction is necessary in both types. The refractionist will correct one as readily as the other, if he has the patient under adequate cycloplegic. 2. Persons with vision of less than 20/20 whose vision is improved with a plus 1 lens or persons who can read 20/20 unaided and who can still read 20/20 with a plus 1 lens before the eye will be found to be on the hyperopic side. Myopes and emetropes will not be able to read 20/20 when a plus 1 lens is added. 3. Persons who can read 20/20 with each eye unaided, but cannot read 20/20 with a plus 1 lens before the eye. These are the true emetropes.

Persons in groups 1 and 2 should have their refractive errors corrected and so brought into group 3. With the natural emetropes they should then have their phorias, fusion and fusion reserve checked, and when necessary built up by proper orthoptic exercises. A word of warning as to refraction: All myopes, all squinters and all children under 12 years of age, to be properly corrected, must be refracted under complete cyclopegia and are therefore not to be entrusted to the optometrist for refraction.

The phorias or natural rest position of the two eyes in question are most readily checked by the use of the muscle light and Maddox rod. The Maddox rod converts the point of light into a line of lights; the lack of desire to fuse such unlike images allows for mental disassociation and the eye, not fixing the muscle light, assumes a position of relative rest. This position is determined by the subjective position of the light in relation to the line. For purposes of uniformity the Maddox rod is placed before the patient's right eye. A variation of ½ to 1 degree vertically and of 3 to 4 degrees laterally is usually considered normal. It will not infrequently be found that much higher degrees are well borne without symptoms, provided that a proportionately high degree of fusion amplitude or fusion reserve is present, in a healthy person.

In a like manner symptoms of eye strain may be quite pronounced in a person with 20/20 vision, low degree of refractive error, normal phorias but poor convergence or convergence that is readily fatiguable. This occurs rather frequently in persons with poor general health and reminds us that the eyes must be considered in relation to the body as a whole. I recently saw a boy with markedly granulated lids complaining of headache. He had had two changes of lens within a year despite the

fact that his refractive error was minimal and his general condition obviously poor. Examination and subsequent treatment showed his eye condition to be a result of malnutrition and anemia, which in turn were a result of dwarf tapeworms, and thus eye glasses were not indicated at all. A great many people buy unnecessary eye glasses.

For testing fusion ability, the simple hand stereoscope does the same thing as the more expensive forms. The stereoscope places a picture before each eye in such a way that each picture can be seen by only that one eye. Prisms move the image of the pictures to make them appear to be superimposed, one on the other. If parts of the picture are omitted from the picture before one eye and the other parts from the other, the complete picture can only be seen by the mental process of fusing the two images.

By using especially prepared cards, it can be determined that one eye is suppressed, as only one of the two pictures is seen at one time. When the two component parts are seen at the same time but separately, simultaneous macula perception or first degree fusion is present. When the two pictures can be seen as one composite picture but a sensation of near and far is not imparted, second degree fusion is present. Finally when a composite picture with depth perception is seen third degree fusion is said to be present. We test for amplitude of fusion by varying the relative position of the two pictures. By noting where the two pictures are seen as one and where the component parts are seen separately, we determine the amplitude of fusion; that is, the ability of the person to mentally correct the distortion produced and maintain binocular single vision.

In conclusion then, screening tests for the eyes in private practice, school or industrial programs should include the elimination of the presence of eye disease; observation as to proper alignment of the eyes; visual acuity tests for each eye separately; and fusion tests to determine the ability to use the two eyes as one in comfort. It must be remembered that seeing is a physiomental process and as such is influenced by the physical and mental status of the individual.

Finally, let me again stress the importance of early and repeated examinations of the eyes from birth to 10 years of age, with every effort being exerted to maintain equality of vision in the two eyes during this critical period.

## DISCUSSION OF PAPERS BY DRS. CALHOUN, OSBORNE AND PERKINS

DR. B. H. MINCHEW (Waycross): The papers just presented by our group are sufficient to bring credit upon our section. Certainly they were presented in such a manner that each of you, in whatever line you may be giving your service, can fully understand and appropriate the contents.

As to the first paper, that by Dr. Calhoun, I want to divert just a moment from the contents of this paper to his service in operating a laboratory for the detection of pathologic conditions arising from our work throughout the State and throughout the South. His contribution in the matter of making a correct diagnosis through his laboratory efforts and pathologic procedures has given to us a new opportunity of making correct diagnoses and, beyond that, to warn us of some of those things of which we should be warned in the matter of regarding a condition as benign when as a matter of fact it is a potentially malignant condition.

The ophthalmologist is called upon sometimes to be a plastic surgeon; and we are appealed to by our patients to correct what they regard as a condition that affects their appearance; and, as a matter of fact, it does affect their appearance. I think we all agree that the eye affords to each of us our greatest expression. We all know that a person can cover his eyes with a blindfold or with dark lenses, as some seek to do to conceal their identity, and then it is difficult to identify the person. Yet one may be a fad, and the other may be something which we should do something about. It is well for us to know that in infancy, as Dr. Calhoun and Dr. Perkins brought out, and in children there are conditions which we should certainly recognize and should correct. But the ophthalmologists, as I say, frequently are called upon to do some cosmetic surgery that probably should not be done, and yet we may fail to do something for the reason that we regard something as a benign thing when definitely it is a potential danger.

Visual function is the first thing we enjoy, and visual function is the first thing we should conserve and make sure we are enjoying a more nearly normal function than with any other of our special functions.

Dr. Calhoun has given us a valuable paper, and with his laboratory, which I have already mentioned, we have that safeguard not only in the matter of treatment but in the matter of determination of diagnosis; and that

is a new thing for the Southeast. I want to compliment him on his paper and particularly on his efforts to give us a new type of service in our profession.

Dr. Osborne's paper was well presented, with eloquence, with wisdom, and with science. The contents of his paper with regard to the abuse of the eyes is something that impressed me greatly. Many of us are prone to permit our patients to use their eyes as much as they please, often during a period of convalescence from a debilitating disease, and often after a very serious operation. He warns us definitely that eye conservation is something that is very important. We know this, that when a man who has been driving an automobile all day finally stops to rest he makes the explanation of the need to rest as that of the physical body. He wants to rest his arms and his limbs but thinks nothing of what has occurred as the result of a ten-hour or twelve-hour drive with that fixity of vision, of interpretation of everything along the road, every obstruction that might be in front of him; and yet he thinks definitely of the need of rest for the body. I think we should tell our patients, and we should have the cooperation of the physicians and the surgeons, that we will not permit the visual function to be overtaxed after any depleting disease or after any serious operation.

Many things come to us as false when we are deprived of vision; our interpretation of them is false. The five blind men of Hindustan, for example, tried to explain the appearance of an elephant. One said it was like a palm leaf; one that it was like a wall; and so on. Each depended upon his sense of touch to interpret it; each of them was correct, in a sense; and yet each one was wrong. It requires the function of vision. How many emotions are dependent upon vision? We depend upon the vision for the interpretation of beauty. We know that beauty is symmetry. Yet how can we interpret real beauty without that sense, except in virtue, etc. We know what Woodworth said in his poem, "The Old Oaken Bucket": "How dear to this heart are the scenes of my childhood, When fond recollections present them to view . . . Of everything that my infancy knew." That may not be entirely correct, but that shows the importance of vision.

We do not go to the airport on the day when a man jumps from a plane in his parachute because it is an unusual thing to do; it is an unusual quality of courage, and all that kind of thing. But, truly, we do not go there to see a particular accomplishment; we go there for the purpose of that emotion that we have in the thought that that thing he does requires a great deal of courage; we go there because we are of the opinion that on this particular occasion he may be killed and we want to see it. So this need relating to our visual function is a very important one, and how much it contributes to us of the newer things of life and the truer things of life! Dr. Osborne has a true realization of the importance of this function, because without vision we go definitely into despondency. How many of our delinquents may possibly become so by failure, because of faculty vision, to enjoy the visual things of earth.

Dr. Perkins' paper fills a distinct need. I am glad he gave the opportunity for preschool examinations as something school officers can do and health officers can do. It is important to get those things before the child goes to school; and the serious errors can be found by the health officer, the school examiner, the pediatrician, and often the family physician. I am glad he brought those thing to our attention.

## TUBERCULOSIS

In regions where histoplasmin sensitivity is widespread, pulmonary infiltrations as well as calcifications are frequently nontuberculous, and can be differentiated from tuberculosis only by skin tests at present. Michael L. Furcolow, M.D., Herbert L. Mantz, M.D., and Ira Lewis, M.D., Pub. Health Rep., Dec. 5, 1947.

## THE GENERAL PRACTITIONER AND HIS OPPORTUNITIES

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The tremendous trend toward specialization is evidenced by the fact that there are so many physicians in hospital residencies seeking to become specialists. Before the war there were about 5,100 residents in hospital residencies at any one time. Today there are some 12,000. Much of this expansion stems from the curtailment of hospital training during the war, but part of it apparently represents a real increase in the number of medical graduates desiring to become specialists.

It should be emphasized that this tendency and certain of its undesirable consequences cannot fairly be ascribed to the various American Boards. The American Boards have effected a tremendous improvement in the quality of specialty practice. They themselves are concerned at the large number of medical graduates desiring certification. They are particularly concerned at the tendency in certain areas for hospitals to limit staff appointments to physicians who are board certified. They have, as boards, disavowed a desire for any such regulation. Similarly organized medicine has gone on record as against such restrictions.

An editorial in *The Journal of the American Medical Association*[1] appearing some time ago, stated in part that "any rule barring a physician from staff privileges because he does not possess a certificate from one of the specialty boards or membership in a special society is not in accord with the expressed policy of the American Medical Association and the Advisory Board for Medical Specialties. Hospital staff appointments should depend on the qualification of physicians to render proper care to patients as judged by the professional staff of the hospital and not on certification or special society membership."

One of the developments aimed at improving not only the status of the general practitioner but his qualifications to practice a high grade of medicine as well, is the establishment of a Section on General Practice by the American Medical Association. At the 1946 session in San Francisco the meetings of this section had a large attendance, as was also the case in Atlantic City a year later. At the mid-winter meeting in Cleveland in January 1948, there is to be a two-day session devoted entirely to the presentation of papers for general practitioners. The Section on General Practice has considered the advisability of the establishment of a certifying board in General Practice somewhat comparable to the certifying boards in the specialties. It has been felt by the sponsors of this idea that such certification would lend status to the gen-

eral practitioner and would also induce him to seek a longer period of training than is now common.

Others seriously doubt whether such measures would contribute materially to the solution of the problem. There now are about 26,000 physicians certified in various specialties and another 13,000 who limit their practice to a specialty. This leaves more than one hundred thousand practicing physicians who are primarily general practitioners. The mere physical task of examining and certifying physicians in large numbers would present serious difficulties.

To meet the need for an organization of general practitioners there was established at Atlantic City the American Academy of General Practice, which has a rather complex organization. The effect of this association upon the status of the general practitioner remains to be seen. One of the provisions for membership in this society is that the physician must take a certain amount of educational work each year.

There is an interesting development in certain hospital and medical care insurance plans involving the general practitioner which seems to deserve considerable attention. An example is the Health Insurance Plan of Greater New York in which groups of physicians provide medical services to subscribers. The plan fosters, as far as possible, the selection by the subscriber of a general practitioner for his physician, in an attempt to have the general practitioner see the subscriber first during illness.

Another development has been the tendency in certain areas to form general practice sections in hospitals so that general practitioners may hospitalize their patients. It is rather difficult to define a general practitioner or what should constitute general practice sections in a hospital. Such sections will probably vary from hospital to hospital, depending on local conditions and the qualifications of physicians. A well-established program is in operation at the Mount Carmel Mercy Hospital in Detroit.[2] Still other hospitals are organizing general practice sections.

Educationally there are efforts to improve the quality of the work done by the general practitioner. In a number of medical schools training in general practice is now being developed, with a general practitioner on the faculty introducing to the students problems in office practice, home calls and convalescent care. At the internship level far more thought is being given now to the training of general practitioners. One of the better plans now under way is the internship program at the University of Minnesota, which is a two year service, so rotated that it provides a year of straight internal medicine and four months each in pediatrics, obstetrics and "minor surgery." Since a definition of minor surgery goes a long way toward defining a general practitioner or a general practice section in a hospital, it is of interest to note the content of that four months of the internship devoted to minor surgery. This work includes the handling of uncomplicated fractures, repair of minor lacerations, diagnosis of acute surgical conditions, experience with such urologic procedures as decompression of the bladder and treatment of urinary tract infections, the management of such ophthalmologic emergencies as trauma and foreign bodies, emergency ambulance service, and postoperative care. There is no regular operating room assignment except for night emergencies, and there is no assignment in otolaryngology. The limitations in the field of surgery in such a general practitioner internship, which are undoubtedly subject to modification as experience is gained, implies that the field covered constitutes the proper sphere of surgical activity of a general practitioner. It is one of the few attempts which have been made to define this sphere.

Opportunities for postgraduate training designed specifically for the general practitioner which involve scores of short courses are increasing every year in all parts of the country. Lists of such courses are published semi-annually in *The Journal of the American Medical Association*. A notable example is the projected two day session at the Cleveland meeting of the American Medical Association in January 1948. Hospitals and medical schools also are giving thought to reserving a number of residency places for physicians in general practice who wish advanced training of longer duration.

Frequently it is thought that one way to secure more general practitioners, particularly practitioners for rural areas, would be to supply more doctors. We have too few physicians in rural areas; therefore why not graduate more doctors to supply these regions? This argument is used in many localities throughout the United States for the establishment of new medical schools. The United States Public Health Service particularly has used this argument.

Most observers are convinced that the mere graduating of more doctors or the establishment of more medical schools would not solve the problem of distribution, in that it would not induce physicians to go to rural areas. More promising as an incentive for rural practice is the provision of hospital facilities in such areas under the Hospital Survey and Construction Act. However, we must recognize that in addition to hospital and diagnostic facilities, physicians require other inducements for living and working in small communities. Physicians, like all others, wish to live in communities where good schools, churches, homes, recreational and cultural facilities are available, in addition to the actual tools for carrying out the practice of medicine.

1 The hospital and the general practitioner (ed.), J.A.M.A. 134:1484 (Aug. 23) 1947.

2 Miller, M. H.: General practice in a large hospital, J.A.M.A. 134:15-16 (May 3) 1947.

Much remains to be done, but we may be encouraged to believe that the many and varied efforts at improving the status and the quality of practice of the general practitioner will achieve important results and will strengthen American medicine as a whole.

## PROTEIN DEFICIENCY IS CALLED MOST COMMON DISEASE IN WORLD

The most common disease in the world—one that is the basis of many illnesses—does not even have a name in the accepted medical language, according to Francisco de P. Miranda, M.D., director of the National Institute of Nutrition, Mexico, D. F., Mexico.

Writing in the February 21 issue of *The Journal of the American Medical Association*, Dr. Miranda says that this disease is a deficiency of protein foods or of good quality proteins, or a deficiency of the essential amino acids—the chemical compounds which make up protein. (In the process of digestion proteins are broken down into these basic elements, which circulate freely in the blood until they recombine to build tissue).

Dr. Miranda's name for this only too common condition is "hypoproteinosis." He writes that its outstanding cause "is the low economic level on which half of the population of the world lives. This economic want leads to the suppression from the diet of the most expensive foods of animal origin, usually badly compensated by an excess of carbohydrates derived from the cheapest cereals or tubers: rice, corn and cassava.

"It is usually a chronic condition difficult to overcome and is essentially different from the plight of the people under the stress of war or famine, which is usually acute and may be remedied by emergency measures, chiefly by cereals.

"It is true that undernutrition, malnutrition and hypoproteinosis may be found superimposed, as now happens in China and India, because to the chronic lack of good quality proteins there is added a lack of certain vitamins, and also an insufficiency of carbohydrates and fats. The extreme condition of lack of all kinds of food leads to inanition, which is usually spoken of as hunger.

"But it is conceivable that the most frequent of all these conditions of want is that produced by insufficient protein or essential amino acids."

"Hypoproteinosis is a condition which specially affects children before six years of age," Dr. Miranda continues. He points out that it affects them by a tendency to stop or delay growth—possibly by preventing the pituitary gland from functioning properly. (The pituitary produces hormones which control the growth—and, particularly, the height—of an individual).

With either a protein or a pituitary deficiency, the resistance to infection of all kinds is also very low, because the antibodies which fight disease are not readily produced in the blood. Furthermore, Dr. Miranda states, there is a serious tendency to diarrhea which may be connected with a lack of one of the amino acids needed for a healthy liver.

If a child survives to the age of 6, Dr. Miranda observes, he becomes "adapted" to hypoproteinosis and is less likely to succumb to infections other than rheumatic fever or tuberculosis. But the adaptation is at a lower all-around level. And the symptoms of chronic hypoproteinosis will remain even in the adult: dry, scaly skin; cold hands and feet; low blood pressure.

## DISINFECTANT ON HANDKERCHIEFS MAY HELP KEEP COLDS FROM SPREADING

Using a disinfectant on handkerchiefs might be one step toward preventing the "common cold" from spreading, according to the London correspondent of *The Journal of the American Medical Association*, writing in the February 28 issue.

Reporting on a lecture by Dr. C. H. Andrewes, F. R. S., of the National Institute for Medical Research on recent research on the common cold, *The Journal's* correspondent said that "some recent evidence suggested that more unpleasant germs were spread from the nose than from the mouth and throat, which led to the question whether bacteria and viruses accidentally shaken from handkerchiefs might not be of great importance. Tests showed that many bacteria might be shaken out and remain in the air. Handkerchiefs from the later stages of colds were found to be particularly effective as germs distributors. Work now in progress suggested that impregnation of handkerchiefs with a disinfectant might make them much less dangerous in this respect."

## BOLIVIAN STUDY SHOWS REDUCED LIFE EXPECTANCY IN HIGH ALTITUDES

Living in a high altitude reduces the life expectancy even for persons who are acclimated, according to a report from the Bolivian correspondent of *The Journal of the American Medical Association*, writing in the February 7 issue.

A study made in that country compares birth rates, mortality rates and life expectancy in three sections of Bolivia: first, the moderately cool districts where most inhabitants live constantly at average altitudes exceeding 10,000 feet; second, the subtropical districts with an average altitude between 3,000 and 10,000 feet, and, third, the tropical districts situated at an average altitude of less than 3,000 feet.

Surprisingly, birth rates were higher in the first and second zones, above 3,000 feet. They were best in the second zone and were followed by those of the highlands. Mortality rates were almost identical in the first and second zones, but were comparatively higher than in the lowlands (15.7 per cent as against 9.3 per cent).

"The effect of altitude on infant mortality is noteworthy," the article observes. "Although in the lowlands with its tropical climate and high incidence of malaria the annual mortality rate stayed at 93.3 per thousand, the corresponding figure for the highlands was 142.2 per thousand. Thus a baby born near sea level had 50 per cent more chance to survive his first year of life than did his companion at 10,000 feet. The relative frequency of whooping cough and congenital weakness accounts for some of the additional deaths in zone one, but does not explain completely the difference as against zone three; nor are there any better hospital and medical facilities in the lower sections of the country than in the higher ones.

"Striking differences due to altitude became evident in the death rate of the age group from one to five years. While only one-eighth of all the deaths belonged to that group in zone three, in zone one more than one quarter of the deaths had been in that age group. Again no one specific disease could be blamed for this relative excess in zone one, even though diseases of the respiratory tract were somewhat more frequent in that section.

"Less striking were the differences in the age group from five to 14 years, but even there the child of the lower altitudes had a better chance of survival. Figures for the age groups from 25 to 64 show a lower death rate in zone one; figures for the ages above 65 are fairly mixed for all the sections. The average ages of death were as follows: zone one, about 31 years; zone two, about 34 years, and zone three, about 37 years."

## HEALTHGRAM

The tuberculosis patient who has not learned the practical facts of life concerning tuberculosis, who has not found a job and a way of living which are compatible with his individual case, can hardly look forward to a successful recovery and a useful life. Paul R. Hawley, M.D., Bull. Am. College Surgeons, Sept., 1947.

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## AMERICAN MEDICAL ASSOCIATION SAYS PUBLIC DEMAND FOR SERVICE AT NIGHT MUST BE MET

The American Medical Association calls on county medical societies to meet the public demand for emergency medical service at night.

"From many sections of the United States," says an editorial in a recent (March 6) issue of *The Journal of The American Medical Association*, "complaints have come lately that persons who have called physicians late at night have been unable to secure attendance from either those whom they considered their family physicians or from specialists or, indeed, from any physician."

The American Medical Association says that large county medical societies or urban groups should maintain a physicians' telephone exchange which would take the responsibility for locating physicians if response is not made to the ringing of the telephone in the home or in the office.

The solution is simple and practical, requiring only a minimum of community organization. A number of county medical societies already maintain a physicians' telephone exchange where doctors' calls may be received and doctors located if their office or home telephones do not respond. Such an exchange can be utilized at night or on holidays, simply by furnishing the exchange with a list of physicians who are able and willing to make night calls. Such physicians would probably include the younger general practitioners, newcomers to the community, and others in general practice. If such a roster were available, and its availability widely publicized, night calls for medical service would soon gravitate to this center and the patient would be assured the services of a physician.

Under such a system the necessity for calling many doctors would be eliminated. Two calls at most would be necessary. Where there is no physicians' telephone service, it might be possible to have the hospitals cooperate by handling such night calls.

The Medical Society of the District of Columbia and the Milwaukee County Medical Society have found such a plan practical, as have a number of other societies.

By this simple and practical expedient, which is doubtless in effect in modified form in a number of communities, the sick can be served and the medical profession can redeem its pledge of unselfish public service.

It is highly important that where such arrangements exist they be brought to the attention of the lay people in the community through appropriate public channels, not once but repeatedly, to keep the shifting populations well informed.

Few problems in the field of medical service have aroused so much public discussion. Whether resentment against physicians is justified or not, it does harm. The solution for this problem is so eminently simple and would reflect so favorably upon physician-patient relationships that medical societies everywhere are urged to give it serious consideration immediately.

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## MEDICAL COOPERATION IN CIVIL DEFENSE

*An address delivered by Brigadier General G. E. Armstrong, Deputy Surgeon General, Department of the Army, in New York City on 6 April 1948 as part of a symposium sponsored by the New York Academy of Medicine and the Metropolitan New York Chapter of the Association of Military Surgeons of the United States on the general subject of Medical Preparedness for the New York City meeting held at New York Academy of Medicine.*

Twice within the lifetime of most of us here this evening we have seen our nation take up the sword for the twofold purpose of preserving democratic ideals and laying the foundations for world peace. Hardly had the echoes of celebration incident to the capitulation of Germany and Japan died away than it began to be apparent that World War II had achieved neither. In spite of our efforts, both as an individual nation and in concert with those governments inspired by a similar purpose, to encourage universal liberty and freedom, the world situation has continued to steadily deteriorate. Actual hostilities continue in scattered areas and everywhere hatred, bitterness, suspicion and greed flourish among those aftermaths of war—unemployment, poverty, hunger and disease. The failure to achieve economic rehabilitation is not confined alone to the vanquished.

All of this provides fertile fields for the growth and spread of ideologies contrasting sharply with our own. Every day brings news which fills us with concern and apprehension. The shadow which today falls across our horizon is not a happy one. Only those who are members of—or candidates for—the Order of the Ostrich can fail to see the signs and read the portents. In a world which has shrunk as a result of the scientific advances of the past several years, we are at once the hope, and almost the only hope, of freedom-loving peoples and the target, a very vulnerable one at that, for the most modern weapons of destruction in the hands of those who believe otherwise. No one needs a crystal ball to see the possibility that tomorrow may

bring another Pearl Harbor—or even a score of simultaneous Pearl Harbors.

Our National Security requires today not only a strong military team, capable of effective defensive and offensive action, but also a nationwide organization capable of furnishing adequate Civil Defense. The latter is equal in importance to the former. Any power which desires to overwhelm this country will attack, suddenly and with all its might, our centers of industry and population with a twofold purpose—the crippling of our means and the destruction of our will to resist.

The importance of Civil Defense received concrete recognition on 25 November 1946 when Secretary of War Patterson appointed a Civil Defense Board, headed by Major General Harold R. Bull, U.S.A. The report of this board was made public by Secretary Forrestal on 14 February 1948 simultaneously with the announcement of the formation, within the National Military Establishment, of a civilian unit designed to plan a comprehensive national civil defense organization—the latter being one of the recommendations of the Civil Defense Board. At this point you will recall that the Office of Civilian Defense of World War II was dissolved by Executive Order on 30 June 1945. It is interesting to note the comment of the board after reviewing the activities of the OCD in retrospect—"it is apparent that the civil defense organization, in spite of noteworthy patriotic response of civilian volunteers, was inadequate to cope with a heavy attack."

Perhaps before going further we should clarify our concept of the term "Civil Defense." For this I can do no better than to quote the definition as set forth in the Bull Board report: "Civil Defense is the organization of the people to minimize the effects of enemy action. Specifically, it (Civil Defense) is the mobilization, organization, and direction of the civil populace and necessary supporting agencies to minimize the effects of enemy action directed against communities, including industrial plants, facilities and other installations, and to maintain or restore those facilities essential to civil life, and to preserve the maximum civilian support to the war effort." Such help and mutual aid are vital principles and both apply equally to individuals, local groups, and municipalities as well as to states and even large areas. Civil Defense includes many services among which the more important are fire, rescue, police and emergency medical service. Although all these services must be coordinated with emergency food and water supply, sources of power and heat, housing, communications, transportation, etc., Civil Defense is not intended to include any active defense measures, such as anti-aircraft warning systems and anti-aircraft defense, nor any responsibility for so-called "internal security," nor the operation of victory gardens, bond sales, and similar patriotic movements.

Let us review what portion of the new national civil defense program is now in existence. Directly under the President is the National Security Resources Board which is responsible for formulating over-all national policy. This board has a medical committee which is responsible for broad medical policies and plans and the chairman of this committee is the Chief Medical Advisor of the board.

As mentioned previously, a Civil Defense unit has been established directly under the Secretary of Defense. This agency no doubt will be charged with the details of planning, organizing, operating, coordinating and directing civil defense activities. The director of this agency will be co-equal with the Army, Navy, and Air Secretaries, thus facilitating the coordination of civil with military defense. The medical aspect of this agency has not yet been announced.

For those two top-level agencies to organize and plan soundly and with thoroughness, considearble time will be required and unless unfortunate circumstances precipitate the need of an undesirable amount of speed, the impact will not be felt at the municipal level for a considerable period of time. Of course, the three military departments have Civil Defense responsibilities —the providing of information and technical advice in fields in which they have special capabilities and the provision of material assistance as needed to the Civil Defense organization. In line with this the medical services of the three Departments in all echelons stand ready now to give technical advice and in emergency will furnish all possible assistance in such fields as medical personnel, supplies, equipment and such installations as may be available. Here in your own area are the surgeons of the First Army Area, the Third Naval District and the Air Defense Command, all prepared to cooperate with you in every possible way. Also available for technical advice and assistance are the local representatives of other federal medical agencies —such as the U. S. Public Health Service and the Veterans Administration. I strongly suspect that these representatives currently have complete and detailed plans ready for immediate execution in the event of a disaster in the New York area of such magnitude as to require their assistance.

The remainder of the national civil defense organization will probably comprise regional, state, county, and municipal agencies. Each of these units will undoubtedly have considerable autonomy with only sufficient guidance from the top to guarantee a modicum of uniformity in organizing and planning. The control and direction of the actual operation will pass from one level to another in the event of an actual emergency only in direct ratio to the latter's magnitude. I might add that the current thinking in Washington is that the remainder of the framework for this nationwide organization will utilize to the fullest extent possible agencies currently

in existence. Relatively small groups at the various levels may be set up for purposes of coordination but the chief responsibility will untimately rest with governors, boards of commissioners, mayors and similarly constituted authorities.

Because of the necessary time lag in the formation of the top-level units of the civil defense organization and because of the realization on the part of citizens throughout the country of the urgency for local planning, there have been initiated recently in various states and municipalities the beginnings of local civil defense organizations. The fact that you are here tonight voluntarily, representing a medical crosssection of New York City and including representatives of federal, state, municipal and civilian medical organizations—and I include in the term medical the various ancillary services—is evidence of a full realization of your responsibility concerning the medical aspects of civil defense for this locality. As I have told similar groups, this urge to prepare ourselves to medically handle disasters of any magnitude is to be encouraged and commended. Even though the final framework is not determined, even though the directives for some standardization of these efforts are not yet available, any enthusiasm which is engendered which may result in organizing, studying, and making concrete plans to meet those needs, which we hope may never come, will not and I repeat *not* be wasted.

My concluding remarks will be in the nature of a few suggestions for your consideration in any future action on your part which may follow tonight's meeting. In the first place, I visualize that from this group will come an over-all directing committee formed with the approbation of the Mayor of New York City and representing certainly those individuals in whom the over-all responsibility for hospitalization and the public health of this city now rest. With these individuals at the head I would add the minimum number of recognized leaders of the medical and allied medical professions of this city. If not too cumbersome I would include key representatives from the various federal medical services currently operating in your midst. This may result in a rather unwieldly group and may necessitate the formation of a small executive committee to facilitate administration and control. After its activation the initial mission of this group will be the determination of the basic concepts for organizing medical cooperation for Civil Defense.

Having arrived at the necessary basic concepts, subcommittees comprising appropriate personnel may be assigned projects for special study to cover every conceivable phase of this most urgent problem. High priority might be given the following studies: (1) education of medical personnel in the special handling of problems in defense against disease and atomic warfare; (2) a study of the hospital facilities of all categories available in the metropolitan New York area, and for adjacent areas which might have to be utilized in the event of a major catastrophe, together with a survey of buildings which because of their nature and strategic location might be utilized as emergency hospitals; (3) a survey of all transportation facilities now currently available for the evacuation of patients as well as facilities which might be commandeered and utilized for the same purpose; (4) a survey of the available medical personnel of all categories by districts or sub-districts so that their "C" Day assignments might be more easily made when the final plan is completed; (5) a study of the problems which might affect the public health of the city in the event of disruption of water supplies, garbage and sewage disposal, and the many other similar problems which would follow in the wake of any large metropolitan disaster; (6) stock-piling in strategic locations of essential items of medical supply. As the overall plan progresses the need for additional subcommittee studies will become obvious.

In order to clarify my thinking in this matter let me elaborate somewhat on one single phase of the overall problem. As an example, let us take the matter of education as it pertains to our subject. This is most important and has many and diverse ramifications. First there is the matter, as mentioned previously, of educating medical personnel in the special problems which we may have to face. Such a committee could well include representatives of your local medical schools together with representatives of the federal medical services which might lend their technical advice and later their actual assistance. Such a study would include what must be taught not only to the undergraduate in our various professional schools but also how else this vital information can be made available to all medical personnel by appropriate post-graduate courses and other practical means of dissemination. In the consummation of the plans which *will* result from such a study it *might* well be that considerable assistance in the way of material and instructor personnel can be made available from various echelons of our governmental services. But in addition to the technical education of our own professional personnel there is the problem of educating the public. People of all walks of life must have a minimum knowledge of what they may be faced with and what they can do to help in the event of a major emergency. This is believed to be of sufficient import to merit its own committee.

Finally, after thorough studies have been made, comes the tying together and the planning and the firming up of an organization to carry out a huge plan even to the point of having a simulated disaster to test out the practicability of your proposed method of action. The tremendous nature of this task, if it is to be worth-while, is immeasurable. It will require the utmost of cooperation of every medical agency in exist-

ence. It will require the interest and enthusiasm of literally hundreds of individuals. It will require the highest degree of coordination, not only between medical agencies but throughout the entire structure comprising Civil Defense. All of this will pay off in the saving of thousands of lives in the event that New York City should ever have the misfortunte to become a Hiroshima or a Nagasaki.

## "HEALTH POLICE"—THE PUBLIC HEALTH NURSE

Why should you be interested in the public health nurse, or, for that matter, public health? For many reasons, but principally because you, as an individual, help to make up the collective whole which is a modern community. And your good health and that of every other member determines the state of health of your community.

No effective program, whether it be the development of a public park or the creation of good health standards, can be carried out except on a community basis, the Educational Committee of the Illinois State Medical Society observes in a *Health Talk*. When you are sick, you see your doctor. It is he who diagnoses your trouble and then sets about to correct it. But he also tries to foresee and prevent sickness. The community is his too and his pride in it is also great. Keeping it free of disease is also the doctor's aim.

But he can't do it alone. His agent is the public health nurse. She is the pathfinder to locating unsanitary conditions, perhaps, or "sick" homes where, for example, mothers with new babies and one or two other young children running about are tired and need help and encouragement. She is the "health policeman."

Do you know a public health nurse who does these things? One who works with a health department, whether it be on a city, county or state basis? A nurse who on a call to your local department of health will look in on your home to help in any way she can?

The public health nurse, also called the visiting nurse, is a personal service to the people sick at home. She is the doctor's assistant and the guardian of you, because you need his care.

In addition to giving immediate help, such as changing a bandage, the public health nurse or visiting nurse seeks to disseminate good will in a home struck with the worry of sickness. She lends a helping hand, perhaps with advice on nutrition, disease as a family problem, or general counsel on good health in family living.

Because she is primarily the doctor's assistant, the nurse oversees the execution of the doctor's orders. In the home, she interprets the doctor's advice on problems related to physical and mental health. Because of her training, the nurse also acts as teacher, explaining the fundamentals of home nursing, how to prevent future illness, helping young mothers with information on infant care, not only before the baby is born but afterwards. And she stays in the home long enough to carry out the doctor's orders and give needed care and instruction. She responds to every call, but she continues bedside care only if a physician is in charge.

It is no wonder then that a national observance honored the public health nurse April 11 to 17. It is she who is on call to help your doctor, to serve you in time of stress.

Public Health Nursing Week is small tribute to pay to these community guardians. In Illinois, special features keynoted the local observance, but in Illinois too added scope was given to the public health nurse, for she, with her sister, the registered nurse on duty in private homes and hospitals, deserve a special vote of thanks. The Illinois State Medical Society, in dedicating their issue of *Health Talk* to the nursing profession, said "thank you," collectively and individually, to the doctor's assistant.

## ATOMIC SCIENCE SAVING MORE THAN IT DESTROYED

Medically applied atomic science has already saved more lives than were lost in the explosions at Hiroshima and Nagasaki, according to a prominent doctor, working with atomic medicine.

He cites blood banks and new treatments for leukemia and other incurable diseases to corroborate this view.

The innumerable persons whose lives have been saved through blood donations from the blood bank can be said to owe their lives to atomic science as its radioactive isotopes helped to discover the preservative that keeps blood cells alive long enough to make the blood bank system possible. This same tracer method has prevented many needless amputations because through it, it is possible to determine whether or not blood circulation to certain parts of the body has been harmed.

The atom is also helping to alleviate the tragic and supposedly incurable disease, leukemia, which has brought certain death in the past through the bone marrow's overproduction of white blood cells; it is helping too the troublesome illness caused from overacitvity of the thyroid gland and in polycythemia, the disease caused by too many red blood cells.

In leukemia, injections of radioactive phosphorus lodge mainly in the long bones that are overproducing the white corpuscles and invisible beams of energy reduce the activity of the bone marrow so that the white cell count begins to drop toward normal. In polycythemia most of the injected phosphorus is absorbed by those tissues which are overproducing the red corpuscles and again the rays emitted by the isotope atoms reduce the output.

Cancer is similar to these disorders in that there is overproduction. The doctor observes, "Since, in addition, physicians can remove some malignant growths by exposing them to x-rays or radium rays, you can see the basis of science's dream of combating cancer internally with radioactive atoms."

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If streptomycin were perfectly harmless, it could be given to every patient with active tuberculosis regardless of the nature and extent of the tuberculous disease and its complications. However, streptomycin is not perfectly harmless. This must not discourage us, since many of our most useful drugs are injurious if given unwisely. James J. Waring, M.D., J.A.M.A., Jan. 31, 1948.

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## DISEASES OF ANIMALS COMMMUNICABLE TO MAN

L. E. STARR, D.V.M., PH.D.,
*Atlanta*
*Veterinarian, Georgia Department of Public Health*

Man's indebtedness to animals is very great. By way of introduction one might quote Thomas G. Hull who said "The progress of man from cave shelter to penthouse has been influenced constantly by the lower animals. It is human nature to take credit for all desirable attainments, to refuse responsibility for the undesirable. Man can pride himself, therefore, on the wisdom of his ancestors, going back as far as the "stone age" in bringing under domestication various animals. Because of that, his ascent from a savage state was hastened—he was assured both bountiful larder and plentiful labor; the excess food supply not required for home use was a source of barter, and the emancipation from the heaviest burdens of labor allowed time and energy for trade, commerce, and travel. That was only the beginning, however. Animals proceeded to change the frontiers of nations, to crown and uncrown kings, to dictate the religious practices, and to cause many a diplomatic headache; they have left a mark on architecture on landscapes, on style of clothes; they have sent to death untold millions of people and have saved from death other millions."

Among the many ways in which animals have exerted an influence on man, disease transmission has been of major significance. More than ninety diseases of animals, virus, bacterial or parasitic, are communicable to man. Some of these are of little importance, others occur so rarely as to be medical curiosities but a considerable number are of major public health importance.

The medical profession may be justly proud of the virtual elimination of the great scourges of the past: smallpox, cholora, typhoid, malaria, and yellow fever. Likewise the veterinary profession has eradicated glanders, contagious pleuropneumonia, tick fever in cattle, foot and mouth disease and has reduced bovine tuberculosis to a position of minor importance.

Heretofore the two professions have worked independently, confining themselves to their own spheres. The physician was primarily concerned with the treatment of patients infected with an animal disease; the veterinarian, with protecting the investment of the animal and poultry husbandryman. That attitude is changing and we may safely visualize a coordinated effort by the two companion professions toward a common goal: the elimination of those diseases which are a menace to the agricultural economy and to human health.

Of all the diseases of animals, none is of more importance in Georgia and the Southeast than rabies. This is a virus diesase which is transmitted through contamination of a fresh wound with the saliva of a rabid animal. All warm-blooded animals are susceptible to the disease. The dog, fox and cat, by nature of their vicious biting habits when rabid and the structure of their teeth, are the principal carriers of the virus and most responsible for its transmission. Man-to-man transmission has never been reported.

Rabies has been reported in this country since colonial times. For the past twenty years an average of about 2,700 people in Georgia have taken Pasteur treatment annually because of exposure to suspected or known rabid animals.

In 1945 the Georgia Legislature passed what is known as Rabies Act No. 406. This act provided for the compulsory annual vaccination of all dogs in the State, control of stray dogs and other pertinent control measures. No funds were provided for enforcing the act, this feature of the program being placed in the hands of the County Boards of Health in each of the 159 counties in the State. This has resulted in the program being placed on a more or less voluntary basis. Exception should be noted in the case of a few counties and cities which have enforced the law through police powers.

In 1945 a total of 2,426 people took Pasteur treatment in the State. In 1946, the first year of real operation of the law, 1,735 people were treated and in 1947 the number dropped to 1,358. In those two years over 200,000 dogs were officially vaccinated. This represents about 50 per cent of the estimated dog population.

Domestic animals, horses, mules, cattle, and hogs died of rabies in large numbers in 1946, the loss being estimated at well over $100,000. During 1947 this loss dropped to an estimated $40,000.

Rabies in the wild fox greatly complicates the problem because the fox population is excessive: they are very susceptible to the virus and are not, of course, under any human control. We are having heavy losses in livestock with increased human exposures from rabid dogs and foxes in a group of counties ranging from Warren, McDuffie, and Clarke south to Johnson and Laurens counties. The fox is one of the

primary factors in this epidemic.

Rabies in the United States is a national disgrace. It has been completely eradicated in England, Australia and other countries and it can be eradicated here. Rabies is primarily a dog disease. Vaccination of 90 per cent of the dogs in an infected area with destruction of all stray dogs will control the disease in those animals and will prevent fox rabies. Once rabies gets into wild foxes trouble multiplies. Public sentiment favorable to the dog vaccination and control program and decreasing the fox population by one-half is absolutely essential. Many fox hunters have the erroneous opinion that rabies control means that we wish to exterminate the fox. We realize that that is impossible and only advise the excess fox population be destroyed as a means of preventing rabies dissemination from fox-to-fox.

Brucellosis is a bacterial disease of cattle, swine, and goats. It is acquired by man through handling infected cattle and swine and by the consumption of raw dairy products from infected dairy cows. It is estimated that 5 to 8 per cent of the dairy cows in Georgia are actively infected, while in many large commercial dairies the percentage may be 25 to 30 per cent. There are three varieties of Brucella; *Br. abortus* found in cattle, *Br. suis* in swine and *Br. melitensis* in goats. With the exception of one case, only *Br. abortus* and *Br. suis* infections occurred in Georgia in 1947.

In the Atlanta area, dairying is the predominant agricultural industry and in South Georgia hogs predominate. As would be expected, approximately 75 per cent of the cases of undulant fever in the Atlanta area were of the abortus variety and resulted from the use of raw dairy products. In the southern part of the State the suis variety was responsible for approximately 75 per cent of the cases. A great majority of the suis types of infection occurred among men rather than women and among those whose occupations brought them into contact with swine, i.e., farmers, slaughter house employees and veterinarians.

In 1947 there were 172 proven cases of undulant fever in Georgia confirmed by agglutination tests. Isolation of the organism was successful in 55 of the cases. Of these, 17 were *Br. abortus*, 17 *suis* and 1 *melitensis*.

Brucellosis can be eradicated. As with rabies, the public must be informed so that they will support such a program. Prevention of human infection is dependent largely upon the elimination of the infection from our cattle and hogs. This can be done by the test and slaughter method or, in problem herds of cattle, by calfhood vaccination. This is a problem for the veterinarian. The medical profession can assist through educational efforts and by supporting a State-wide pasteurization law. Some cities such as Atlanta and Augusta have recently put into effect pasteurization ordinances but these are limited to those municipalities.

Anthrax is primarily an industrial hazard of workers with hides, hair, wool, and fish. It also occurs among agricultural workers on farms where anthrax is endemic. The anthrax bacillus is a soil contaminant where it exists in the spore form. Pastures may remain infected for years because the spore form is highly resistant to heat, chemicals, sunlight and drying. Human anthrax is quite rare but very serious to those infected.

Tularemia, caused by *B. tularense*, is transmitted principally by rodents and, particularly, by wild rabbits. A considerable number of human cases are reported annually. Due to the difficulty of eradicating the infection among animals, control of the disease in man is largely a matter of education.

Many of the *Salmonella* organisms responsible for the infection type of food poisoning are common inhabitants of the intestinal tract of domestic animals. Others are found in rodents. It is obviously impossible to eradicate the infection in animals but outbreaks of food poisoning in man can be prevented by cleanliness, sanitation and adequate refrigeration.

Endemic typhus fever is, of course, a common disease in Georgia. DDT dusting in conjunction with rat eradication is apparently the most satisfactory method of control.

Many other diseases of animals communicable to man could be mentioned. Among those of considerable public health significance in the United States are Rocky Mountain spotted fever, psittacosis, actinomycosis, and bovine tuberculosis.

Although the diseases mentioned above are of animal origin and primarily a problem for the veterinarian, control of these infections will require assistance on the part of the medical profession and the lay public. In a broad sense, control of these diseases is everybody's problem.

## HEALTHGRAMS

The toxicity of streptomycin now appears to be sufficiently great to deny use of the drug to those patients who are making satisfactory progress under conventional forms of treatment. At present, most experienced physicians prefer to reserve the limited supply for patients more acutely ill, and especially for those in whom the disease has been progressive during recent months, and no other treatment is likely to be effective. Streptomycin is of no lasting or significant benefit to patients who apparently have hopeless, destructive types of pulmonary tuberculosis. H. McLeod Riggins, M.D., and H. Corwin Hinshaw, M.D., Am. Rev. Tbc., Aug., 1947.

* * *

Constructive, purposeful activity is far better psychotherapy than a playful waste of leisure time. Ed., Am. Rev. Tbc., Aug., 1947.

* * *

It is wise to assume that all subjects who show a positive tuberculin test before the age of three years have active infection. In such children, the infection has hardly had time to become inactive. Joseph D. Wassersug, M.D., N. E. Jour. Med., July 3, 1947.

## COUNTIES REPORTING FOR 1948

### *Baldwin County Medical Society*

President—E. Y. Walker, Milledgeville
Vice-President—Joe D. Combs, Milledgeville
Secretary-Treasurer—M. E. Smith, Milledgeville
Delegate—S. A. Anderson, Milledgeville
Alternate Delegate—R. W. Bradford, Milledgeville
Censors: Y. H. Yarborough, R. W. Bradford, and Veronica M. Pennington, all of Milledgeville.

### *Ben Hill County Medical Society*

President—G. W. Willis, Fitzgerald
Vice-President—J. E. Smith, Fitzgerald
Secretary-Treasurer—G. K. Cornwell, Fitzgerald
Delegate—J. E. Smith, Fitzgerald
Alternate Delegate—Raymond Harris, Ocilla

### *Bibb County Medical Society*

President—Leon D. Porch, Macon
President-Elect—W. Charles Boswell, Macon
Vice-President—O. F. Keen, Macon
Secretary-Treasurer—A. M. Phillips, Macon
Delegates: C. N. Wasden, Macon; Thomas L. Ross, Macon.
Alternate Delegates—Ralph G. Newton, Macon; J. R. S. Mays, Macon.
Censor: W. L. Bazemore, Macon

### *Bulloch-Candler-Evans Medical Society*

President—Louie H. Griffin, Claxton
Vice-President—Frank B. Mitchell, Jr., Metter
Secretary-Treasurer—Curtis G. Hames, Claxton
Delegate—J. H. Whiteside, Statesboro
Alternate Delegate—W. E. Simmons, Metter
Censors: W. E. Floyd, Statesboro; W. E. Simmons, Metter, and J. H. Whiteside, Statesboro.

### *Cobb County Medical Society*

President—Walter G. Crawley, Marietta
Vice-President—Alfred Colquitt, Jr., Marietta
Secretary-Treasurer—William H. Benson, Marietta
Delegate—Luke G. Garrett, Jr., Austell
Alternate Delegate—R. W. Fowler, Marietta
Censors: A. H. Fowler, G. F. Hagood, Marietta; and M. N. McCall, Jr., Acworth.

### *Coffee County Medical Society*

President—George M. Ricketson, Douglas
Vice-President—Sage Harper, Douglas
Secretary-Treasurer—J. E. Morris, Douglas
Delegate—Dan A. Jardine, Douglas
Alternate Delegate—Sage Harper, Douglas
Censor: T. H. Clark, Douglas

### *Colquitt County Medical Society*

President—R. M. Joiner, Moultrie
Vice-President—John F. McCoy, Moultrie
Secretary-Treasurer—Preston D. Conger, Moultrie
Delegate—J. B. Woodall, Moultrie
Alternate Delegate—F. M. Gay, Moultrie
Censors: Cecil N. Brannen, Robert E. Stegall, and James R. Paulk, all of Moultrie

### *Coweta County Medical Society*

President—H. C. Glover, Jr., Newnan
Vice-President—Joseph W. Parks, Jr., Newnan
Secretary-Treasurer—J. H. Arnold, Newnan
Delegate—H. C. Glover, Jr., Newnan
Alternate Delegate—G. W. Hammond, Newnan

### *Floyd County Medical Society*

President—Warren M. Gilbert, Rome
Vice-President—J. T. McCall, Jr., Rome
Secretary-Treasurer—Ralph J. Davis, Rome
Delegate—Lee H. Battle, Jr., Rome
Alternate Delegate—Warren M. Gilbert, Rome
Censors: Ralph B. McCord, Robert F. Norton, and G. W. Holmes Cheney, all of Rome

### *Fulton County Medical Society*

President—Walter W. Daniel, Atlanta
President-Elect—Stephen T. Brown, Atlanta
Vice-President—Bernard P. Wolff, Atlanta
Secretary-Treasurer—A. Worth Hobby, Atlanta
Delegates: Walter W. Daniel, Stephen T. Brown, A. Worth Hobby, McClaren Johnson, Edgar Boling, H. Walker Jernigan, R. Hugh Wood, Shelley C. Davis, Marvin Mitchell, M. T. Benson, Jr., W. S. Dorough.
Alternate Delegates: A. V. Hallum, Fred F. Rudder, A. O. Linch, J. Harry Rogers, D. Henry Poer, B. L. Shackleford, Eustace A. Allen, Vernon E. Powell, Don F. Cathcart, T. L. Tidmore.

### *Grady County Medical Society*

President—A. B. Reynolds, Cairo
Secretary-Treasurer—J. V. Rogers, Cairo
Delegate—J. V. Rogers, Cairo

### *Gwinnett County Medical Society*

President—Fayette A. Sims, Lawrenceville
Vice-President—Thomas L. Parker, Duluth
Secretary-Treasurer—Harry Hutchins, Buford
Delegate—W. W. Puett, Norcross
Alternate Delegate—D. C. Kelley, Lawrenceville

### *Hall County Medical Society*

President—C. W. Whitworth, Gainesville
Vice-President—John M. Hulsey, Jr., New Holland
Secretary-Treasurer—Pratt Cheek, Jr., Gainesville
Delegate—C. D. Whelchel, Gainesville
Alternate Delegate—B. B. Davis, Gainesville
Censors—E. W. Grove, Hartwell Joiner and Pratt Cheek, Jr., all of Gainesville

### *Hart County Medical Society*

President—George T. Harper, Dewy Rose
Secretary-Treasurer—Louis G. Cacchioli, Hartwell
Delegate—Louis G. Cacchioli, Hartwell

### *Jackson-Barrow Medical Society*

President—Oliver C. Pittman, Commerce
Vice-President—John B. Elder, Winder
Secretary-Treasurer—Paul F. Brookshire, Jr., Winder
Delegate—Alexander B. Russell, Winder

### *Lamar County Medical Society*

President—D. W. Pritchett, Barnesville
Vice-President—J. H. Jackson, Barnesville
Secretary-Treasurer—S. B. Traylor, Barnesville
Delegate—John B. Crawford, Barnesville
Alternate Delegate—J. A. Corry, Barnesville

### *Laurens County Medical Society*

President—C. G. Moye, Brewton
Vice-President—E. B. Claxton, Dublin
Secretary-Treasurer—O. H. Cheek, Dublin
Delegate—A. G. Bell, Wrightville
Alternate Delegate—Fred J. Coleman, Dublin
Censors: A. T. Coleman, C. A. Hodges, and E. B. Claxton, of Dublin.

### *McDuffie County Medical Society*

Secretary-Treasurer—B. F. Riley, Jr., Thomson

### *Morgan County Medical Society*

President—J. H. Nicholson, Madison
Secretary-Treasurer—W. C. McGeary, Madison
Delegate—W. C. McGeary, Madison
Alternate Delegate—J. H. Nicholson, Madison

### *Muscogee County Medical Society*

President—Franklin D. Edwards, Columbus
Vice-President—Roy L. Gibson, Columbus
Secretary-Treasurer—Henry H. Boyter, Columbus
Delegate—Franklin D. Edwards, Columbus
Censors: Frank B. Schley, Dave Berman, and J. L. Stapleton, all of Columbus

***Polk County Medical Society***

President—W. H. Lucas, Cedartown
Vice President—Cecil B. Elliott, Cedartown
Secretary-Treasurer—William H. Blanchard, Cedartown
Delegate—P. O. Chaudron, Cedartown
Alternate Delegate—George M. White, Rockmart

***Stephens County Medical Society***

President—Wm. H. Good, Jr., Toccoa
Vice-President—Robert E. Shiflet, Toccoa
Secretary-Treasurer—C. L. Ayers, Toccoa
Delegate—W. Bruce Schaefer, Toccoa
Alternate Delegate—Julian Q. Watters, Toccoa
Censors: E. F. Chaffin, Arthur G. Singer, Jr., and Julian Q. Watters, all of Toccoa

***Sumter County Medical Society***

President—Russell B. Thomas, Americus
Vice-President—John H. Robinson, III, Americus
Secretary-Treasurer—Bon M. Durham, Americus

***Troup County Medical Society***

President—Henry W. Grady, LaGrange
Vice-President—Hollis Hand, LaGrange
Secretary-Treasurer—J. R. Turner, LaGrange
Delegate—Kenneth D. Grace, LaGrange

***Turner County Medical Society***

Secretary-Treasurer—J. H. Baxter, Ashburn
Delegate—J. H. Baxter, Ashburn

***Upson County Medical Society***

President—R. E. Dallas, Thomaston
Vice-President—Wm. Pruitt Woodall, Thomaston
Secretary-Treasurer—Ivylyn Girardeau, Thomaston
Delegate—J. M. Kellum, Thomaston
Alternate Delegate—James A. Woodall, Thomaston

***Warren County Medical Society***

President—H. B. Cason, Warrenton
Vice-President—F. L. Ware, Warrenton
Secretary-Treasurer—A. W. Davis, Warrenton
Delegate—H. T. Kennedy, Warrenton
Alternate Delegate—F. L. Ware, Warrenton

***Washington County Medical Society***

President—Emory G. Newsome, Sandersville
Vice-President—Ralph B. Taylor, Davisboro
Secretary-Treasurer—Joseph E. Lever, Sandersville
Delegate—N. J. Newsom, Sandersville
Alternate Delegate—O. D. Lennard, Sandersville
Censors: O. D. Lennard, and O. L. Rogers, both of Sandersville

***Wayne County Medical Society***

President—J. W. McFarlane, Jesup.
Vice-President—J. A. Leaphart, Jesup
Secretary-Treasurer—Fred M. Harper, Jesup
Delegate—Fred M. Harper, Jesup
Alternate Delegate—E. C. Leaphart, Jesup

***Whitfield County Medical Society***

President—James R. Whitley, Dalton
Vice-President—John H. Venable, Dalton
Secretary-Treasurer—H. J. Ault, Dalton
Delegate—Truman Whitfield, Dalton
Censors: Trammel Starr, G. L. Broaddrick, and Truman Whitfield, all of Dalton

***Wilcox County Medical Society***

President—J. A. Bussell, Rochelle
Vice-President—S. B. Ellis, Pitts
Secretary-Treasurer—J. D. Owens, Rochelle
Delegate—J. M. Estes, Abbeville
Alternate Delegate—Wm. P. Durham, Abbeville

***Worth County Medical Society***

Secretary-Treasurer—Gordon S. Sumner, Sylvester
Delegate—Hilton J. Brown, Sylvester

## CAN YOU SEE?

Despite medical advances in rehabilitation, wearing glasses to correct defects of vision is still resisted by many persons as a drawback, especially among women. The author of "Vanity of vanities, all is vanity" could have had glasses in mind if he were preaching today. Yet wearing glasses with the proper correction not only gives clear vision, but also has a great effect on one's general health, it is pointed out in a *health talk* of the Educational Committee of the Illinois State Medical Society.

The shape of the eyeball has a great bearing on its vision. When the eyeball is too short, the imperfection is spoken of as farsightedness. When the eyeball is too long, it causes nearsightedness or myopia. When the front part of the eyeball is irregular in contour, the condition produced is called astigmatism. All these conditions mean that the sight is impaired, but they can be corrected by a specially trained ophthalmologist or eye specialist. The results of proper treatment are often remarkable.

The child in school who is considered slow or dull may lead the class if defective vision is his drawback and is corrected. But without well fitted glasses he cannot see. His brain may be good, but the center located there to help him learn by receiving impressions of everything about him is blocked off because the eye itself is not functioning properly as the channel of such impressions. All or most eye difficulties can not he corrected with glasses, however.

Many persons are unaware of the great colorful beauties that confront us on all sides because their defective vision goes untreated. Many persons have other diseases of the eye that could be corrected by competent medical care.

In the farsighted eye the rays of light come to a focus behind the retina, the tissue at the back of the eye which receives the light rays. A convex type lens will bring the rays of light to proper focus on the retina. The nearsighted eye focuses the rays in front of the retina, and a concave lens is needed to focus the light properly on the retina.

If astigmatism or muscle imbalance is present in either condition, a suitable correction must be included in the lens to correct this defect.

The eye changes as we grow older. Because of this, it is necessary to have a periodical examination of the eyes so that they can he accommodated to the change.

We have only one pair of eyes given us and it is important to care for them. Handicapped persons who use a crutch to assist them in walking do so wisely because they would rather be a part of the world about them than to be "shut-ins." This attitude should also guide the wearing of glasses. Glasses are a crutch to assist the wearer to see normally. Watch the strained, haunted look on the faces of persons who need glasses disappear when they are properly fitted.

An ophthalmologist, a doctor of medicine who is skilled in the diseases of the eye, is the person to see for an examination. He will look for any diseases that may be present. An optician is one who makes or deals in eyeglasses or other optical instruments and who fills prescriptions for glasses. An optometrist is one skilled in the measurement of the refraction of the eye for prescription of glasses.

Give your brain a chance by protecting your eyes. See your doctor so that you can see the world.

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## GERMAN MEASLES

The web of proof that German measles during the first three months of pregnancy may cause congenital malformations is being woven tighter. Another strand in this web is the first quarterly report of the committee appointed by the National Society for the Prevention of Blindness and the American Academy of

Pediatrics and headed by Dr. Herbert C. Miller of the University of Kansas Hospitals.

In the report of 132 mothers who had German measles during the first trimester of pregnancy there were 18 babies reported as normal. Sixty-two babies weighed less than six pounds at birth. Seventy-six babies had congenital cataracts. Thirty-five were found to be partially or completely deaf. Twenty-two babies were microcephalic and 46 were mentally retarded. Malformations of the heart were diagnosed in 67 babies, but none was diagnosed as a "blue baby." Disturbances of the eye, other than congenital cataracts, were observed in 13 babies, including cogenital glaucoma three, microphthalmus five, nystagmus two, chorioretinitis two, and strabismus two. Dental defects were found in two children, one of whom had congenital absence of some of the teeth and the other of whom had a diffuse enamel defect. Hypospadias was observed in four children and inguinal hernias in four. Malformations of the extremities, including club foot one, webbing of the fingers one, were found in three babies. Cleft palate was diagonsed in three children and harelip in one. Micrognathia was diagnosed in one child. There was one cretin, one mongolian idiot, one child with enlargement of one ear, another with enlargement of one breast, one child with a defect of the fourth rib.

Other infections than German measles were reported, but the data are too scanty except perhaps in respect to infectious mononucleosis. There have been four mothers who contracted infectious mononucleosis during the first ten weeks of pregnancy and three of the four babies had malformations of the heart. Two of the three babies died in the first two weeks and postmortem examination revealed extensive congenital malformations. One of the three babies with heart trouble had congenital cataracts. No other malformations were found. The fourth baby has remained entirely well.

In order to make this study of increasing significance, the committee needs more case material, especially cases of German measles in expectant mothers *where the diagnosis has been made by a physician.*

Doctors who have such information are requested to write to Dr. Herbert C. Miller, University of Kansas Hospitals, Kansas City, Kansas, for a questionnaire.

## CONGRESS ON RURAL HEALTH

There is hardly a more striking example of the rapprochement between medical and lay groups concerned about our problem of inadequate medical care than the National Conference on Rural Health, which is holding its third annual meeting in Chicago. Under the auspices of the Committee on Rural Medical Service of the American Medical Association of virtually all of the principal farm organizations and a group of physicians who have demonstrated courage and statesmanship in working for the extension of rural medical service.

In a relatively brief time this congress on rural health has done effective work in quickening the interest of men of medicine in their community needs and in making the communities themselves more alert to their responsibilities. In 1947 the Committee on Rural Medical Service made a reconnaissance to determine the situation with respect to medical personnel and facilities in every county in the United States. The results of this survey, made with the assistance of state and county medical societies, were published in The Journal of the American Medical Association. Reprints were distributed to the deans of American medical colleges and to the twelve hundred hospitals which the AMA has approved for internships and residencies in medicine. Thus the Committee on Rural Medical Service, and its Advisory Committee. From the Farm Groups, which are the central groups of the National Conference on Rural Health, are pointing the way of opportunity for young physicians in rural areas. Regional directors all over the nation help to make the invitation persuasive.

This year the conference is devoting much attention to child health and to health education of school children. But it will return again and again to its major motif—directing more doctors to the American countryside. Practice there must be made attractive for young doctors, fresh from urban universities with their wealth of intellectual resources. A promising trend that the conference would encourage is the practicing of young physicians in groups of two and three in rural areas. Here we have a method of rural practice that makes it possible for young physicians to pool their investments in clinical and laboratory facilities, and gives them what every professional man needs, a stimulating association with those of close cultural kinship.—The New York Times, Saturday, February 7, 1948.

## U. S. ARMY PASSES THROUGH WINTER WITH BEST HEALTH ON RECORD

The United States Army was in better health throughout the past winter than during any like period in past years for which comparable statistics are available, it was announced recently by the Army Medical Department.

Strictly comparable figures for the past quarter-century disclose an average January hospital admission rate in the Army of a little over 14 per 1000 troops per week, while the weekly rate for January, 1948, was 9.4 per 1000. The February, 1948, rate was 50 per cent lower than the average for the past 25 years; the rate this year was approximately ten-and-one-half cases of illness per 1000 troops per week, while the 25-year average was about fifteen-and-one-half per week.

The normal peak load of illness in the Army, as elsewhere, almost always occurs in February, due to respiratory infections. Although this year was no exception, influenza constituted an almost negligible quantity of total illness, and other respiratory diseases added comparatively few cases to the total, thus holding the peak down to below average.

Army doctors are cautious about attributing low influenza rates to the use of new vaccines, as no situation has appeared wherein definite comparisons could be made with non-vaccinated groups. It was pointed out that the improved health was reflected in figures on all kinds of illness, including venereal disease, which declined 40 per cent in the Army between January, 1947, and this year.

## DOCTORS URGED TO BE ON CLOSER LOOKOUT FOR WEIL'S DISEASE

Weil's disease is disproportionately low in the United States when compared to the incidence in England and continental Europe, according to an article appearing in the March 20 issue of *The Journal of the American Medical Association.*

A study of 78 cases in Detroit made by the authors, Dr. Joseph G. Molner, Dr. Karl F. Meyer and Herbert A. Raskin, M.S., P.H., Michigan State Public Health Service, supports the contention that this type of infectious disease is not difficult to detect if physicians are on the lookout for it.

Since North Americans show no particular immunity to this disease, such a discrepancy would seem to be due to the failure to recognize cases, the article states.

Weil's disease is characterized by jaundice, fever, muscular pains and enlargement of the liver and spleen. It is caused by microbes carried by rats and dogs. The disease may be transferred to man by some biting insect.

"It is most likely," the authors write, "that only the striking, easily recognized severe forms have been diagnosed and reported. It is known that mild forms also occur which undoubtedly outnumber the severe ones. Therefore, it is readily understandable that unless physicians are aware of the disease, many cases

will pass unrecognized."

These infections seem to be most prevalent among men; 73 of the 78 cases in Detroit were men who stated that there was rat infestation on their jobs.

## SECOND YEAR PERIOD OF ADJUSTMENT FOR BOTH MOTHER AND BABY

"Significant behavior disturbances in babies are relatively infrequent during the first year of life as compared with the second," according to Dr. Benjamin Spock, Rochester, Minn., in the March 20 issue of *The Journal of the American Medical Association.*

Feeding problems are most common during the first year while the second year brings pronounced changes in an infant's personality and behavior and calls on the mother for entirely new resourcefulness and adaptability.

During the first year the mother has become accustomed to baby's automatic cooperation, but at about a year the infant moves independently. He explores constantly; his ego is taking definite shape; he senses that he is a separate person and is entitled to wishes and will of his own.

"As he becomes more insistent on his independence from his mother, he simultaneously becomes aware of his dependence," the doctor writes. "Undoubtedly, it is part of his total pattern of emotional development that when he has the ability and the desire to explore away from his mother he also has the instinct to hurry back to her noisily when he meets something strange and potentially dangerous."

More feeding problems begin during the second year than during any other period. The irritation of the frustrated mother and the balkiness of the child easily spread into other aspects of their relationship.

"Psychiatrists," Dr. Spock continues, "have stressed the danger to the child's emotional development of too early and too rigorous toilet training. Pediatric observation would indicate that the earliness at which training efforts are begun is much less important than the reaction of the child and the attitude of the mother during the precarious second year.

"If the mother is a stable, affable sort of person, she finds ways to get along with this new child, even if she has to go against current dogma on diet, toilet and discipline. But the insecure or the dominating mother is easily thwarted.

"Although the pediatrician cannot hope to change the mother's basic nature, I believe he can give her advice that minimizes the clashes. He should explain at the start that the baby will be a better judge than mother or pediatrician of how much he needs at each feeding, warn the mother when starting solids to give the child time to get used to them and advise against weaning until the child shows readiness, even though it is not until the middle of the second year."

In conclusion Dr. Spock states "we need also experimentation with some sort of guidance nursery or guidance playgrounds where one and two year old children, too young to be left at nursery schools, could come to play. Their mothers could look on, learn from each other and have the opportunity when they felt the need to ask advice from an expert nursery school teacher or psychiatric social worker in attendance."

Dr. Spock agrees with a number of pediatricians who advocate placing the new baby in the room with the mother rather than relegating it to the hospital nursery. This system, now being tried experimentally in Detroit and New Haven, helps to familiarize the parents with the baby.

## RECENT INCREASE IN HEART DISEASE IN WOMEN MAY BE FROM SMOKING

Smoking may have something to do with the higher incidence of coronary thrombosis among women in the past 30 years, according to an article appearing in the current issue of *Hygeia*, the health magazine of the American Medical Association.

"Four groups of one thousand patients each (smokers, nonsmokers, coronary thrombosis and non-thrombosis) were subjected to statistical analysis. On the average smokers were found to get coronary thrombosis 10 years earlier than nonsmokers. Although not a cause of the disease, smoking is considered by many heart specialists to be a factor," the author, Irene E. Soehren, Dallas, Ore., states.

In coronary thrombosis a clot forms in one of the coronary arteries, and a portion of the heart muscle is deprived of blood for a length of time suffcient to do damage.

"Probably as many as one man in 30 and one woman in 90 over 40 years of age will suffer an attack of coronary thrombosis this year. Thousands of men and women who have had coronary thrombosis may reasonably expect to live many more years and lead comparatively normal, useful lives. Rest and reassurance are two of the most important forms of treatment.

"The fifth day is the most worrisome," Miss Soehren continues. "All the area of the heart supplied by the closed artery and its branches is incapacitated. Hemorrhage and death of the tissue take place. The height of softness in this area is reached the fifth day, when it is most subject to rupture. If rupture occurs, the internal bleeding is nearly always fatal.

"But if the patient gets past the first week, one can breathe easier. Complete healing takes six or eight weeks. The muscle deprived of blood no longer contracts. It dies, and scar tissue forms. Healing of the injured area has been effected, but the heart's effciency is reduced in proportion to the extent of the muscle damage.

"Many patients go back to so nearly normal that one cannot tell they have had a coronary attack," the writer asserts.

As life expectancy increases, more people than ever will die of coronary heart disease. "But through the use of the new anticoagulant drugs, heparin and dicumarol, more and more will survive the first attack.

"Today coronary thrombosis is not a death sentence."

## JET INJECTION

A new method of injecting drugs and toxins that uses no syringe, no needles and virtually eliminates all objectionable pain associated with the needle technique, has been announced by medical authorities.

Called jet injection, this new technique is based on the fact that extremely high pressure jets of fluid are capable of piercing the human skin in such a fine stream that little or no pain is experienced by the patient.

In operation, the drug to be injected is first placed in a small metal tube that is shaped like a blunt-nosed bullet and has in its tip a tiny hole measuring only three-thousands of an inch in diameter. The other end is closed with a rubber plug.

This little tube is then encased in a sterile aluminum container which is then placed in the "injecting instrument." This instrument is about the size of a two-cell flashlight and looks much like one, except it has an enclosed calibrated high tension spring instead of batteries.

The spring is controlled by a release button, which when pressed pushes a plunger against the rubber plug in the bullet-nosed tube. This forces the liquid injection through the tiny hole as a fine, high-velocity jet under pressures between 2,300 to 3,500 pounds per square inch. The liquid comes out in such a fine sharp stream that it pierces the skin, giving little or no pain.

There are a few mechanical kinks in the device still to be corrected before it can be put into general practice. The medical scientists who developed the injector are hopeful this instrument some day will completely replace the syringe and needle for ordinary drug administration.

## BIG, BRAWNY MUSCLES NO TRUE INDICATION OF PHYSICAL FITNESS, COMMITTEE REPORTS

Big brawny muscles—the kind that athletes often display in competitive sports—are no true indication of physical fitness, according to a report of the subcommittee of the Baruch Committee on Physical Medicine which appears in the March 13 issue of *The Journal of the American Medical Association.*

"A clear definition of the term physical fitness is elusive," says the committee, which is composed of Drs. Robert C. Darling, Ludwig W. Eichna and Harold G. Wolff, of New York, and Clark W. Heath, of Cambridge.

"The purely physical requirements of various tasks, whether they be jobs or physical feats, are too varied to be determinable by any one set of criteria," the committee's report says, adding:

"Many instances can be cited in the army and in civilian life of persons well endowed physically who could not carry on practical tasks because of the emotional and psychologic elements involved."

The article pointed to the many persons with poor physical equipment and even defects who, judged by accomplishment, are fit to carry on their jobs. "The only final test of fitness," the report says, "seems to be the ability to perform the task desired without undue fatigue or exhaustion."

The committee explained that it was difficult to set up universal standards of fitness because of "the large number of persons with physical defects who cannot be judged by fixed standards but who, we know, can often carry on an active and useful life," and thereby be considered fit.

"The purpose of the usual medical examination is to discover organic physical defects," the report says. "It is highly desirable, however, to extend the scope of the physical examination. In relationship to fitness it is necessary not merely to discover defects but to consider the potential performance of the patient in spite of his defects. For example, defective sight or hearing, especially if helped by glasses or hearing aids, may be no handicap to daily life. Good insight and strong motivation on the part of the patient can overcome even severe handicaps. In general one may say that organic disease and abnormalities affect fitness only when they reduce physical and mental activity below that necessary for the effective carrying on the patient's job."

The committee concluded that the routine medical history and physical examination can and should do more than assess physical defects.

The report says in part:

"The physical equipment of the patient and his physiologic response to stress are only a partial though necessary component of fitness. The final test is how he uses his equipment in his play and work . . . Moreover, he should be able to perform the tasks repeatedly without fatigue and have in addition a reserve to meet and sustain unexpected stresses, should they arise, without being incapacitated by them. A physically-fit person will be able to meet these requirements and still maintain a sense of well-being. This picture of functional health is certainly an adequate goal. Actually there are no satisfactory data to predict that the physically fit subject will have a longer life span, a lower incidence of degenerative disease or a greater resistance to infection than his unfit confrere.

## WAR YEARS SHOW INCREASE IN DUODENAL ULCERS IN POPULATION

Duodenal ulcers in women showed a definite increase during the war years, according to an article by Dr. Maurice Feldman of Baltimore in the March 13 issue of *The Journal of the American Medical Association.*

Dr. Feldman reports on a study of 1,154 cases of duodenal ulcer over a 10-year period, prewar, 1937 to 1941, and during and immediately following the war, 1941 to 1946. Of the 1,154 cases, there were 480 cases during the prewar period and 674 cases observed during the war years.

A duodenal ulcer is an open sore located in the first part of the intestine.

"It is the concensus that the incidence of duodenal ulcer increased in the civilian population during the war," the article says. "One would naturally expect an increase in the incidence of ulcer, because of the tremendous amount of emotional strain, tension and overwork during the war.

"It was of interest to determine whether the sex incidence changed during the war. There was an increase in the number of females with peptic ulcer seen during wartime.

"Of the 480 persons with duodenal ulcer noted in the prewar period, 395, or 82.3 per cent, were males and 85, or 17.7 per cent, were females. In the war period group, there were 674 persons, of whom 565, or 83.8 per cent, were males and 109, or 16.2 per cent, were females.

"There is an impression that duodenal ulcer occurred in women at a later age than in men.

"The majority of persons with duodenal ulcer begin to have symptoms between the ages of 20 and 35," the doctor found. "Often there is considerable lapse of time between the onset of the ulcer and the symptoms.

"The determination of the duration of the ulcer has always been a problem. In the majority of cases the duration of symptoms ranged from one to 10 years, the predominant period being five years."

In this study, according to the author, "a comparison was made of the number of cases of hemorrhage occurring in each five-year period. In the 1,154 cases, there were 41 cases of massive hemorrhage. In the 480 cases, there were 15, while in the 674 cases of the war period it was noted in 26 cases. There appeared to be a slightly greater incidence of hemorrhage in females during the second period.

"Pain in relation to food is one of the most characteristic symptoms of duodenal ulceration. However, pain is not always present. In this series of 1,154 cases, 703 presented a history of pain; of these, 595 gave the characteristic relation of pain and food."

There has been a marked increase in the number of cases of gastric ulcer in the aged, according to an article by Drs. Henry A. Rafsky, Michael Weingarten and Charles Kriger, all of New York, in this same issue.

"The study is based on a series of 1,800 succcessive admissions for peptic ulcer to two hospitals from 1941 to 1947. Three hundred and seventy-eight patients, or 22.2 per cent, were 60 years of age or older on admission. In 106 cases the first symptoms of ulcer occurred after the patient had reached the age of 60 years. There was some doubt in 25 as to whether there had been any evidence or complaint referable to the ulcer prior to the age of 60. These cases were excluded from this study, leaving 81, or 4.5 per cent, of the 1,800 patients in whom the history definitely indicated that the onset of the ulcer symptoms occurred after the fifth decade," the doctors report.

"The serious complication of hemorrhage appears to be more frequent in patients over 60 years of age. Complications of ulcer seem to occur more frequently in those persons with an onset of symptoms late in life. The general incidence of hemorrhage in patients of all ages hospitalized for peptic ulcer is approximately 30 per cent."

*The* JOURNAL *would like to record the scientific work of Georgia physicians. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

## PRECAUTIONARY MEASURES SET UP FOR EPIDEMICS OF RINGWORM OF SCALP

Public health measures designed to prevent another epidemic of ringworm of the scalp among children have been drawn up by a group of New York skin specialists, according to an article appearing in the current issue of the *Archives of Dermatology and Syphilology*, published by the American Medical Association.

Ringworm of the scalp, which was one of the physician's main problems during the war years, is a fungus growth. It develops one or more circular patches of redness and crust formation. The hairs in the affected region become loose and break off just above the skin surface, leaving short stumps.

The main reason for its spread is attributed by the authors, Drs. Frank C. Combes and Howard T. Behrman, New York, to lack of parental observation and control, and cleanliness.

"It is a great tribute to American medicine," the doctors write, "that recognition of the severity, contagion and extent of the disease brought forth speedy measures of isolation, control and treatment. Treatment centers were established in strategic areas throughout the country.

"Various new drugs have been employed with success in certain types of ringworm of the scalp, but the major weapon of control in the so-called 'human' type is x-ray treatment.

"In a certain percentage of cases, reinfection (from contaminated hats, articles of clothing, other children or infected members of the same family) may occur. Following x-ray treatment all infected articles of clothing should be burned."

The New York skin specialists have outlined the following set of measures designed to control subsequent epidemics of ringworm of the scalp:

1. Ringworm of the scalp should he made a reportable disease.
2. The puhlic should be reached through the press, pamphlets and radio.
3. It is recommended that city-wide, complete and periodic inspection of children who are in institutions be made by qualified physicians.
4. Barbers should be told about epidemics and cautioned to be on the lookout for sores on the scalp.
5. Children should wear hats as a precaution against infection in public places.
6. Clipping and shaving of the hair prior to x-ray treatment should be done in the clinics at which infected children are treated. The parents should be warned not to take an infected child to a harber.
7. The department of health should register equipped clinics and qualified physicians for the treatment of ringworm of the scalp.
8. It is recommended that no child be permitted to return to school until he is entirely free from infection.

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## SURGEONS DEVELOP NEW TECHNIC TO REMOVE FOREIGN BODY

Two Indianapolis doctors have developed a new technic for removing solid bodies lodged in the esophagus, the tube that leads from the throat to the stomach. The doctors are: W. D. Gatch and W. F. Molt.

Writing in the current issue of the *Archives of Surgery*, published by the American Medical Association, the doctors report the case of a man 46 years of age who swallowed his upper denture. They made a small opening in the stomach, passed an instrument upward into the esophagus, grasped the object and removed it through the stomach opening.

This method of removing solid hodies lodged in the lower part of the gullet, they explained, avoids the dangerous and often impossihle method of extraction through the mouth with forceps. This accident is especially dangerous when the object swallowed has sharp points.

## NEWS ITEMS

Dr. William B. Bates, Jr., formerly of Waycross, recently opened offices in Ludowici for the general practice of medicine.

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The Bibb County Medical Society dinner meeting was held at the S & S Cafeteria, Macon, March 2. Program: Rh Problems in Medical Practice—Practical Lahoratory Tests. Informal discussion of Lower Nephronephroses, Dr. Darrell Ayer, Atlanta. Dr. A. M. Phillips, secretary.

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Dr. Everett L. Bishop, Atlanta, was elected president of the International Association of Medical Museums at the recent meeting in Philadelphia.

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Dr. MacKenzie Brown, specialist in anesthesiology, was recently named head of Phoebe Putney Hospital's first anesthesiology department, the Albany-Dougherty Hospital Authority revealed. Dr. Brown's appointment followed closely the addition of Dr. J. M. Feder, heading a pathologic department, and other improvements at the Albany medical center.

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Dr. J. Gordon Barrow, Atlanta, announces the opening of offices at 1028 West Peachtree Street, N. W., Atlanta. Practice limited to cardiology.

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The Blue Ridge Medical Society dinner meeting was held at the Supper Club, Blue Ridge, March 3. The following officers were elected: Dr. James F. O'Daniel, Ellijay, president; Dr. John Y. O'Daniel, Ellijay, vice-president; Dr. Albert L. Morris, Young Harris, secretary-treasurer; Dr. James Burdine, Blue Ridge, delegate; Dr. Albert L. Morris, Young Harris, alternate delegate; Censors: Dr. Winston Burdine, Blue Ridge; Dr. Thomas J. Hicks, McCaysville, and Dr. Ed W. Watkins, Ellijay.

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Dr. George Cauble, Jr., formerly of Cartersville, announces the opening of offices at Acworth for the practice of medicine.

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Dr. Doyle Caswell recently completed his internship at the Greenville General Hospital, Greenville, S. C., and announces the opening of offices at Franklin for the practice of medicine.

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The Crawford W. Long Memorial Hospital, Atlanta, held its regular staff meeting in the dining room, March 9. Program: "Intestinal Surgery in the Newborn". Case presented by Dr. Charles E. Holloway, and Dr. R. T. Crissey; Case presented by Dr. Wadley R. Glenn, and Dr. C. P. Yarn, Jr. Discussion by Dr. T. I. Willingham, Medical section meeting was held in the medical library. Round table symposium: "Chemotherapy of Leukemia with Special Reference to Urethane", Dr. Tully T. Blalock. Surgical section met in the clinic reception room. "Unusual Case of Carcinoma of the Stomach", Dr. D. Henry Poer, and Dr. Albert H. Fregosi. Pediatric section meeting in the clinic lecture room. Executive committee for the year 1948: Dr. Exum Walker, president of the staff; Dr. McClaren Johnson, president-elect; Dr. C. Purcell Roberts, secretary; Dr. Wadley R. Glenn, medical director of the hospital; Dr. Eugene L. Griffin, chairman, obstetrics and gynecology section; Dr. L. H. Muse, chairman, pediatric section; Dr. Charles E. Rushin, chairman, surgery section; and Dr. Wm. R. Crowe, chairman, medical section.

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The Dugas Journal Club of the University of Georgia School of Medicine, Augusta, recently had as guest speaker Dr. W. F. Windle, Philadelphia, who discussed "Alterations in the Central Nervous System Resulting from Asphyxia at Birth". Dr. Windle is chairman of the department of anatomy of the medical school of the

University of Pennsylvania. He was introduced by Dr. G. Lombard Kelly, dean of the University of Georgia School of Medicine. Participating in the discussion which followed the address were: Dr. Peter B. Wright, Dr. W. F. Hamilton, Dr. Philip Dow, Dr. Richard Torpin, and Dr. J. C. McAfee. Dr. Robert B. Greenblatt is president of the Dugas Club, and Dr. John W. Remington is secretary.

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Physicians from 17 Georgia counties met recently at Americus to study cancer problems in Georgia. Speakers included Dr. Robert C. Pendergrass, Americus; Dr. Enoch Callaway, LaGrange; and Dr. Lon Grove, Dr. Everett L. Bishop, and Dr. Elliott Scarborough, all of Atlanta.

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The Georgia Medical Society, Savannah, held a special meeting at the auditorium of the Thomas Gamble Building of Armstrong Junior College, March 2. Guest speaker was John E. Ransom, Atlanta, director of division of hospital services, Georgia Department of Public Health. Dr. Stephen J. Lange, secretary.

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Dr. Mayes Gober, Marietta physician, recently addressed the Marietta Nurses Club at the Marietta Hospital dining hall. His subject was "Obstetrics". He held an open forum on the general subjects about which the nurses desired information.

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Dr. Perry Gold, Atlanta, announces the opening of his office at 727 West Peachtree Street, N. E., Atlanta, for the practice of pediatrics.

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The First District Medical Society meeting was held in the Hotel DeSoto, Savannah, March 24. The society ceased to function during World War II. Dr. Steve P. Kenyon, Dawson, president of the Medical Association of Georgia, spoke on the problems of Georgia medical care. The meeting was attended by a large number of physicians from the district. Officers elected were: Dr. W. O. Bedingfield, Savannah, president, Dr. Byrd Daniel, Statesboro, vice-president, and Dr. William H. Fulmer, Savannah, secretary-treasurer.

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The Fulton County Medical Society dinner meeting was held at the Academy of Medicine, Atlanta, March 18. Dr. Harry Rogers had charge of the program. "Repair of an Arteriovenous Fistula", motion picture, Dr. Dan C. Elkin; "Experimental Studies on Blood Flow in an Arteriovenous Fistula", Dr. Roy Robertson; "Radioactive Isotopes in the Study of Vascular Disease", Dr. Frederick W. Cooper, Jr.; "Intra-arterial Transfusion: Experimental and Clinical Studies", Dr. Irvin Trincher; "Surgery of Coronary Disease", Dr. Patrick Shea.

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The Georgia Medical Society held its regular meeting at the society's hall, 612 Drayton Street, Savannah, March 9. Discussion: "Care of the Premature Infant with accompanying illustrative movie", Dr. Milton M. Mazo. Dr. Stephen J. Lange, secretary.

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Dr. Ralph H. Chaney, Augusta, was one of the featured speakers at a forum on "Medical Care in the South" sponsored by the Woman's Auxiliary of the Richmond County Medical Society, held in the Music Hall of the Municipal Auditorium, Augusta, March 1. Dr. Chaney, former president of the Medical Association of Georgia, used as his topic, "Voluntary Prepayment or Regimentation". Other topics that were discussed included: "The Responsibility of the Educator in Health Problems", Dr. D. W. Daniel, Clemson College; "Industrial Health in the South," Mr. Ray W. Stuckey, Augusta, personnel director of the Bath Mills, Inc.; "Health Problems in Georgia", Dr. Clair A. Henderson, Savannah. Dr. David R. Thomas, Augusta, president of the Richmond County Medical Society, served as moderator of the forum. Mrs. W. Joe Williams, Augusta, is president of the Woman's Auxiliary to the Richmond County Medical Society.

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Dr. Abe J. Davis, Richmond County Commissioner of Health, and Dr. Hervey Cleckley, both of Augusta, recently conferred with Dr. T. F. Sellers of the Georgia Department of Public Health, Atlanta, regarding the establishment of a mental hygiene clinic in Augusta.

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The Laurens County Medical Society met in the County Health Office, Dublin, February 20. 1948 officers are: Dr. C. G. Moye, Dublin, president; E. B. Claxton, Dublin, vice-president; Dr. O. H. Cheek, Dublin, secretary-treasurer. Dr. A. G. Bell, Wrightsville, was named delegate to the annual session of the Medical Association of Georgia, Atlanta, and Dr. Fred J. Coleman, Dublin, was named alternate. Board of censors include Drs. A. T. Coleman, C. A. Hodges, and E. B. Claxton.

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Dr. Tracy W. Middlebrooks, formerly of Macon, has become associated with Dr. J. L. Gallemore, Perry, in the practice of medicine.

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Dr. R. J. Mincey, Jr., formerly resident physician at St. Joseph Hospital, Atlanta, announces the opening of his office at Conyers for the practice of medicine. Dr. Mincey is a graduate of the University of Georgia School of Medicine, Augusta, and served overseas in the U. S. Army Medical Corps during World War II.

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The Fulton County Medical Society dinner meeting was held at the Academy of Medicine, Atlanta, April 1. Dr. Guy C. Hewell was in charge of the program. Case Report—"Acute Lupus Erythematosus", Dr. Eugenia Jones; Clinical Talk—"Some Phases of Legal Medicine", Dr. Frank Eskridge; Paper of the evening —"Facts Pertinent to a Rational Concept of Abruption Placenta", Dr. R. A. Bartholomew.

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Dr. Edgar R. Pund, Augusta, professor of pathology at the University of Georgia School of Medicine, was guest speaker at the meeting of the Augusta Social Service Council at the Town Tavern, March 15. Dr. Pund discussed "Cancer Research".

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The Richmond County Medical Society held its dinner meeting at the Country Club, Augusta, March 12. Program: "Allergy to Drugs", Dr. Oscar Swineford, Jr., Charlottesville, Va., professor of the practice of medicine at the University of Virginia, guest speaker. Dr. Charles Mulherin, secretary.

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Dr. C. K. Sharp, Arlington physician, was honored at the Arlington Methodist Church February 29 with special church services called "Dr. Sharp's Day". The people came in large numbers, people from all walks of life, filling the church auditorium to its capacity to honor the birthday of their family physician. Fifty years ago Dr. Sharp, who was just starting out as a young physician, hung out his shingle in what was then supposed to be the "sickliest" town in Georgia—Arlington. Congratulations Dr. Sharp!

* * *

The South Atlantic Association of Obstetricians and Gynecologists met for its 10th annual convention at the Sheraton Bon Air Hotel, Augusta, February 12. Approximately 200 obstetricians and gynecologists of five Southeastern States were present at the convention. Guest speaker at the opening scientific session was Dr. Carl Henry Davis, Wilmington, Del., clinical professor and director of the Marquette University School of Medicine, Milwaukee, Wis., and assistant professor of obstetrics and gynecology at the University of Chicago. Dr. Davis discussed "Operative Obstetrics". Others

who read papers were Dr. Arthur L. Rivers, Charleston, S. C.; Dr. Charles J. Andrews, Norfolk, Va.; Dr. John B. Cross, Dr. Albert Heyman, and Dr. John R. McCain, Atlanta, with Dr. Fred R. Minnich, Atlanta, as discussant; Dr. Charles H. Mauzy, and Dr. James F. Donnelley, Winston-Salem, N. C. Dr. J. Randolph Perdue, Miami, president, and Dr. E. D. Colvin, Atlanta, secretary-treasurer.

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Dr. John D. Stillwell, formerly of Atlanta, was recently appointed to serve as health commissioner for Thomas and Grady counties, assuming the office made vacant by the resignation of Dr. Arthur Hill. Dr. Stillwell has been connected with the Georgia Department of Public Health for about 10 years. He will reside in Thomasville.

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Dr. C. W. Twitty, Newton physician, who has been a country doctor in Baker County since he graduated from the Atlanta School of Medicine, now Emory University School of Medicine, Atlanta, in 1912, was honored on his 69th birthday, March 19, by the people of Baker County and from other sections. Congratulations, Dr. Twitty!

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Dr. Louis A. Valante, Darien, announces the removal of his offices into the home formerly owned by the late Dr. C. C. Fishburne, First and Second Streets, Darien, for the practice of medicine.

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Dr. C. Roy Williams, Wadley, has been advised that his application for fellowship in the Southeastern Surgical Congress has been endorsed and signed by the credentials committee of the State of Georgia, and by the executive council of the congress. The certificate of fellowship was delivered at convocation exercises recently held at Hollywood Beach Hotel, Hollywood, Fla.

* * *

Dr. Peter B. Wright, Augusta, professor of orthopedic surgery for the University of Georgia School of Medicine, was named regional chairman of the committee on fractures and other traumas at a recent meeting of the American College of Surgeons. The committee was formed in 1922 by the American College of Surgeons, and since that time has been continuously active in promoting the better care of fractures. Dr. Wright has secured several explanatory motion pictures to be shown to firemen, policemen, ambulance drivers, and Boy and Girl Scout groups.

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The Georgia Baptist Hospital medical staff dinner meeting was held in the nurses' dining room, Atlanta, March 16. Dr. Wm. G. Hamm, secretary.

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The Upson County Medical Society held its regular monthly dinner meeting at Hotel Upson, Thomaston, March 2. The following members were present: Drs. B. C. Adams, John D. Blackburn, B. L. Bridges, R. L. Carter, R. E. Dallas, J. E. Garner, Ivylyn Girardeau, J. M. McKenzie, J. M. Kellum, T. A. Sappington, F. M. Woodall, and W. P. Woodall. Guests included Dr. Rufus F. Payne, Rome, and Mr. Winn, chaplain of Battey Hospital, Dr. D. W. Pritchett, Barnesville, Dr. Lewis Beason, Butler, and Dr. M. M. Head, Zebulon. Program: "The Treatment of Tuberculosis", Dr. Rufus F. Payne, Rome. His lecture was illustrated with lantern slides. An open forum followed the lecture at which time Dr. Payne answered questions asked by the physicians.

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The American Association for the Study of Goiter will meet at the King Edward Hotel, Toronto, Canada, May 6, 7, 8, 1948, according to Dr. T. C. Davison, secretary, Atlanta. Guest speakers include: Dr. Roy E. Swenson and Dr. George Curtis, Columbus, Ohio; Dr. Charles P. Peblond and Dr. J. Gross, Montreal, Quebec, Canada; Dr. W. T. Salter, New Haven, Conn.; Dr. W. M. McConahey, Rochester, Minn.; Dr. D. McEastern, Montreal, Canada, and Dr. John L. Parnell, Vancouver, B. C.; Dr. James Nickson, New York, N. Y.; Dr. Bengt Skanse, Boston, Mass.; Dr. Mayo Soley, San Francisco, Calif.; Dr. S. F. Haines, Dr. M. H. Power, Dr. M. M. D. Williams and Dr. M. P. Kelsey, Rochesteri Minn.; Dr. Earle M. Chapman, Boston, Maes.; Dr. William Meissner and Dr. Frank Lahey, Boston, Mass.; Dr. Paul Wozencraft and Dr. M. M. Foote, New York, N. Y.; Dr. George Crile, Jr., Dr. J. Beach Hazard and Dr. R. S. Dinsmore, Cleveland, Ohio; Dr. J. deJ. Pemberton and Dr. B. Marden Black, Rochester, Minn.; Dr. Brown M. Dobyns, Miss Beatrice Lennon, Dr. Oliver Cope and Dr. Rulon W. Rawson, Boston, Mass.; Dr. L. D. Marinelli, Dr. B. N. Skanse, Dr. Jack Trunell and Dr. Rex G. Fluharty, New York, N. Y.; Dr. J. H. Means, Boston, Mass.; Dr. D. A. McGinty, Dr. E. A. Sharp and Dr. W. Dill, Detroit, Mich.; Dr. W. F. Reinhoff, Jr., Baltimore, Md; Dr. E.Perry McCullagh and Dr. W. T. Sirridge, Cleveland, Ohio; Dr. Elmer C. Bartels, Boston, Mass.; Dr. A. L. Lockwood, Toronto, Canada; Dr. Leon Goldman, San Francisco, Calif.; Dr. Brien T. King, Seattle Wash.; Dr. I. Darin Puppel and Dr. George Curtis, Columbus, Ohio; and Dr. Joseph L. DeCourcy, Cincinnati, Ohio.

## DOCTORS' DAY REMINDS US OF A DEVOTED PROFESSION

It is appropriate that Doctors' Day, now observed throughout the United States, comes on March 30, the anniversary of the first use of ether anesthesia in a surgical operation by a young Georgia physician, Crawford W. Long, 106 years ago. His pioneer achievement sets him apart as one of the rare benefactors of mankind. But his devotedness and his charity are typical of many thousands who follow his profession.

We are wont to think of the doctors of our grandfathers' time as going about doing good with little or no thought of themselves and their renumeration; certainly, there were great hearts and gallant spirits among them. But their successors now, if the truth were known, probably equal in human kindness, as they surpass in skill, the average of practitioners in the simpler days of Crawford Long. Consider, for example, the time and talent freely given to indigent patients at Grady Memorial Hospital by many leading Atlanta doctors who serve on that institution's visiting staff. The same is true of other hospitals and of countless cases of individual charity.

On Doctors' Day, which originated in Georgia and which has been taken up by the country at large, it is well for us to reflect that in spite of all the unsolved problems in the economic and social field of medical service and notwithstanding all that the cynics say, our doctors are among the truest servants of the commonwealth.—*Atlanta Journal*, editorial pages, March 30, 1948.

## OBITUARY

*Dr. Warren Coleman*, aged 79, Augusta, nationally-known physician, author of medical papers, teacher in some of the nation's foremost schools of medicine, and a consultant to numerous outstanding hospitals, died at his residence, 2749 Hillcrest Avenue, Augusta, February 13, 1948. Dr. Coleman was born in Augusta, the son of the late John Scott and Hetty Kennedy Coleman. After taking an A. B. degree from Transylvania College, he graduated from the New York University Medical College, New York City in 1891, and did post-graduate study at Johns Hopkins, Baltimore. Later, he received an honorary Master of Arts degree from Transylvania College. Considered one of the eminent physicians of the United States, Dr. Coleman returned to Augusta in 1938 after practicing for upwards of 50 years in New York City.

During the years he was away he distinguished himself for his pioneering work in the cure of typhoid fever, and last summer was presented a medal and certificate by the City of New York for his work in that connection at Bellevue Hospital there. He was a member of the Century Club of New York, was listed in Who's Who, was a member of the Richmond County Medical Society, the Medical Association of Georgia, the American Medical Association, American Men of Science, and of the Order of Cincinnatus. He was a member of the First Christian Church. Survivors include his wife, Mrs. Bertie Twiggs Coleman, and four cousins, John D. Twiggs, Mrs. Henry North, Mrs. Frank Fleming and Mrs. Roscoe Perkins, all of Augusta. Funeral services were held at the residence, 2749 Hillcrest Avenue, Augusta, with the Rev. Charles A. Roe officiating, assisted by Dr. A. Warren Huyck. Burial was in Magnolia Cemetery, Augusta.

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*Dr. Joseph Isham Jenkins*, aged 72, prominent physician, civic and educational leader of Hartwell and Hart County died March 16, 1948. Dr. Jenkins graduated from the University of Georgia School of Medicine, Augusta, in 1900. Following his graduation he practiced medicine in Hart County until the time of his death. He was a native of Hart County. He was a Shriner and a former member of the Board of Regents of the University of Georgia and served as a trustee of several schools in Hart County. He served on the Governor's staff under the late Governor Eugene Talmadge and also under Governor Richard B. Russell. Well-known in medical circles, Dr. Jenkins was a member of the Hart County Medical Society, the Medical Association of Georgia and was a fellow of the American Medical Association. He is survived by his wife; five daughters, Mrs. O. P. Willis, Montgomery, Ala.; Mrs. W. L. Warner, Macon; Mrs. H. F. Magoon, Miss Mildred Jenkins, and Miss Helen Craft Jenkins, all of Hartwell; six sisters and one brother. Funeral services were held at the Bethesda Methodist Church, Hart County, with the Rev. R. L. Lyle, the Rev. W. W. Cash, and the Rev. W. J. McNeill officiating. Burial was in the Bethesda churchyard. Hart County.

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*Dr. Robert Cooley Maddox*, aged 55, Rome pediatrician and civic leader, died of a heart attack February 23, 1948. Dr. Maddox was born in Rome, the youngest child of the late Judge John W. and Frances Elizabeth Edmondson Maddox. His father represented the Seventh District in Congress and for many years was judge of the Rome Superior Court Circuit. He was an alumnus of Darlington School for Boys and for a number of years was the school physician. He attended the University of Georgia and was a member of Sigma Alpha Epsilon Social Fraternity. He graduated from Atlanta Medical College, now Emory University School of Medicine, Atlanta, in 1916. He served with a U. S. Army Medical Unit in World War I, with the rank of captain, and soon after leaving the Army accepted the position of examiner with the Interstate Life Insurance Company, Chattanooga, Tenn. Dr. Maddox was a past president of the Floyd County Medical Society, a president-elect of the Seventh District Medical Society, a member of the Medical Association of Georgia, a fellow of the American Medical Association, a former president of the Rome Rotary Club, and a member since boyhood of the First Presbyterian Church, Rome. He was a member of the Rome Board of Education and a Darlington trustee. He is survived by his widow, Mrs. Ruth Hand Maddox, Rome; a stepson, Edward Guilford, Cedartown; three brothers, Frank and Judge James Maddox, of Rome; and J. Dickson Maddox, Portland, Ore.; a sister, Mrs. Berta Maddox Hand. Funeral services were held at the chapel of the Daniel & Son Funeral Home with Dr. John Melton, Baton Rouge, La,. former pastor of the First Presbyterian Church, assisted by Dr. Leigh Scott, officiating. Burial was in Myrtle Hill Cemetery, Rome.

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*Dr. Samuel F. Smith*, aged 73, Glennville physician, died February 19, 1948. He was one of the pioneer builders of that section, having been born in what was then Tattnall but now Evans County near Daisy. He was the son of the late Mr. and Mrs. George Washington Smith. He graduated from the University of Georgia School of Medicine, Augusta, in 1902. Dr. Smith was for a number of years a member of the board of aldermen of Glennville, and part of that time he was also mayor pro tem. He was a member of the Glennville Baptist Church, a Scottish Rite Mason, a member of the Tattnall County Medical Society, the Medical Association of Georgia, and a prominent farmer. He is survived by his wife, Mrs. Bertha Goss Smith; a son Lamont Smith; a daughter, Mrs. Gordon Oliver; a grandson, Gordon Oliver, Jr.; and three brothers. Funeral services were held at the chapel of Rimes' Mortuary with the Rev. Ed Joyner, the Rev. Charles D. Stewart and the Rev. W. B. Screws officiating. Burial was in the City Cemetery, Glennville.

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*Dr. Benager Columbus Teasley, Sr.*, aged 72. Hartwell, for many years leading physician and surgeon of northeast Georgia, died in an Atlanta hospital March 10, 1948. Dr. Teasley was the son of the late Isham Jefferson and Amanda Jane Brown Teasley of Elbert County, where he was born. He graduated from the University of Georgia School of Medicine, Augusta, in 1900. His wife, the former Miss Effie G. Adams, Bowman, died some years ago. Of a kindly, friendly and sympathetic disposition, he was a man who rendered an unusual service to thousands. Early in his medical career he lived in the Reed Creek section of Hartwell, later moving to Hartwell, where he had been prominent in civic and church affairs. He was a memher of the Board of Stewards of the Hartwell Methodist Church at the time of his death, was also a Mason and Shriner. He was past president of the Hart County Board of Education; past president of the Kiwanis Club; honorary member of the Alpha Kappa medical fraternity; a member of the Hart County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. Surviving are two sons, Dr. Gerald H. Teasley, Texarkana, Ark., and Dr. B. C. Teasley, Jr., Robinson, Ill., and a sister. Miss Lizzie Teasley, Bowman. Funeral services were held at his home with his pastor, Rev. Henry H. Dillard of the Hartwell Methodist Church officiating. Burial was in Northview Cemetery, Hartwell.

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*Dr. Carlton Juan Wellborn*, aged 59, Blairsville leader in professional and civic circles, died unexpectedly at his home, March 21, 1948. Dr. Wellborn attended Young Harris College and graduated from Emory University School of Medicine, Atlanta, in 1917. Making his home in Gainesville until a few years ago, he was Hall County health officer for 10 years. He was a member of the staffs of Governor Ellis Arnall, and Governor M. E. Thompson; chairman of the Union County Democratic Executive Committee and former senator from the fortieth district. A veteran of World War I, he served as chairman of the draft board in Union County in the last war. He was a Mason, a former member of the Gainesville Rotary Club and a member of the American Legion. Dr. Wellborn is survived by his wife, the former Cora Butt of Gainesville; two daughters, Mrs. W. L. Rogers, Gainesville, and Mrs. John R. Irwin, Atlanta; a son, Lt. Carlton Wellborn, Fort Bellvoir, Va.; mother, Mrs. Georgia Wellborn, Blairsville; sister, Mrs. W. W. Whittington, Atlanta, and three grandchildren. Funeral services were held at the Blairsville Methodist Church, of which he was a member, with the pastor Rev. Jack Waldrep offciating. Burial was in the churchyard, Blairsville.

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# CURRENT PROBLEMS OF ORGANIZED MEDICINE

STEVE P. KENYON, M.D.
*Dawson*

First, may I express to you again my profound gratitude for the honor that you bestowed upon me in electing me as your President for the year just passed, and my appreciation for your loyal cooperation in every undertaking. Everywhere I have encountered sincerity and oneness of purpose in trying to improve ourselves as physicians and thereby render better medical care to the people of this State. It has been an inspiration to me.

My year in office has passed very rapidly. It seems that almost overnight it is time to relinquish the gavel and all its accompanying responsibilities to my able successor. As I do so, I promise him and you my unchanging affection, loyalty and cooperation. I want to go on as a working member of this Association.

Most of my predecessors who have in the past stood before this great organization to make their farewell address as President have, I imagine, had emotions like mine today. First, there is joy and relief in the knowledge that the hours and days and weeks of study, work, travel and anxiety are over, for the President's duties are strenuous. During this past year I have had the privilege of speaking to most of the District Medical Societies and to some lay groups. In these talks I have humbly tried to impress them with the problems of organized medicine in Georgia as I saw them. Much as I have enjoyed the hours of intimate contact and fellowship with the officers and members of this Association, there is disappointment when I take stock and realize that so little has been done during my administration to meet the many problems that face organized medicine today.

Those problems have not changed. Even as far back as 1933 we find medical leaders discussing the problem of the vanishing general practitioner, and offering solutions for it. In 1938 Dr. George A. Traylor, in his retiring address before this Association, spoke in serious vein of the problems of socialized medicine. Today the virulence of the problems has been accentuated and they need our serious study. So, in my closing address as your President, I would like to bring them again to your attention and consideration.

Last June I was fortunate enough to attend the centennial meeting of the American Medical Association in Atlantic City. As I sat in the general meetings, in the House of Delegates, the various conferences, the scientific sections, and as I strolled through the scientific exhibits, I was amazed at the dignity and greatness of this magnificent organization. I felt humbly proud to be a member of this Association of doctors who for one hundred years have given their country, both in peace and in war, medical care unparalleled in the history of the world.

In one hundred years organized medicine has developed the means of controlling infectious and contagious diseases, diabetes,

President's address before the annual session of the Medical Association of Georgia, Atlanta, April 29, 1948.

the anemias, nutritional deficiencies, of doing surgery undreamed of, and even of correcting congenital abnormalities. In this century man's life expectancy has increased from 40 years to almost 67 years. With such achievements it would seem that medicine might sit by the wayside and rest for a while. Yet, newer and more complex problems face us each day. With longer life the diseases of age are becoming more frequent and therefore more important. With the perfections of science come the increased human imperfections, and the inability of the human to fit himself to his new environment and new relations, whether they be domestic, religious or political. "Man's inhumanity to man makes countless millions mourn," might be modernized by saying, "Man's inhumanity to man makes countless millions of neurotics and psychosomatics."

As we read our papers from day to day, we realize that no individual, nor group of individuals, is free in these turbulent times of the complexities of life that face the peoples of the earth in this third postwar year. In local news we have an ever-increasing number of divorces, neuroses, insanities, suicides and murders. In national news we have industry and labor troubles with a constant threat of strikes; we have a steady wail by one group that taxes are too high, and by another that they are too low; we have overproduction in one area of our nation and shortages in another: we have one group of citizens who are satisfied with American medicine as we know it today and another who say that medical care is inadequate and that government-controlled medicine is the only equitable and just way to give proper medical care to all people. In the international news we see nations calling each other liars, robbers, thieves and murderers. There is a constant wrangling, with the threat of war and a total destruction of the earth with the atomic bomb. Every organized, responsible group from the United Nations, through the Congress, State and municipal governments, down to the individual, is faced with the solution of these problems of maladjustment, which are threatening the deterioration of our civilization.

If we doze in the shade of our successes, then we will soon be engulfed by socialized medicine and the medical profession enslaved. No one realizes this any more than the Officers, the Board of Trustees and the House of Delegates of the American Medical Association. They are particularly concerned not only with the increase of heart disease, hypertension, cancer, rheumatism, peptic ulcer and neuroses, but also with community health needs, the distribution of doctors, the rural practice of medicine and the alarming shortage of trained nurses.

The problems in Georgia are practically identical, when we add a touch of local color, and they will never be solved by civilian groups alone, be they philanthropists or lawyers, churchmen or lawmakers. These problems are ours, and their solution is largely the responsibility of the Medical Association of Georgia, and its component societies. May I enumerate them first and then discuss some of the ways of solving them?

1. The threat of socialized medicine caused by:
   a. The failure to educate the public as to the accomplishments of medicine under our democratic system; the failure to make the public understand that the primary objective of organized medicine is to render the best possible medical care at reasonable cost.
   b. The failure to teach the public, the State officials, and the lawmakers that the care of the indigent is not solely the responsibility of two thousand physicians, but a state or county responsibility which should be shared by all citizens.
   c. The failure to secure balanced distribution of doctors. Georgia has a population today of 3,000,000, with 2,168 active physicians, 200 of whom do institutional work, a ratio of 1 to 1,327. Atlanta has a population of 330,000, with 532 doctors, or a ratio of 1 to 620. There are two counties without doctors. The Georgia Department of Public Health needs forty physicians and over two hundred nurses.

d. Over-specialization. In the United States today there are approximately 21,000 physicians certified by specialty boards, and 131,000 others. This is as it should be, but recent surveys of medical students and recent licentiates showed that 67 to 93 per cent planned to become specialists. I have no fight with the specialists. They have played a major part in raising the standards of medicine and of making the practice of medicine more nearly an exact science. But the ratio between specialist and general practitioner is rapidly reaching the danger point. Whenever the specialists outnumber the general practitioners medical care for the common illnesses will have to be furnished by some government agency.

e. The increased cost of medical care in illnesses requiring prolonged hospitalization. Necessary though it is, this expense is overwhelming the families in moderate circumstances. But in another way the cost of medical care is increased, it seems to me, needlessly. As the rural areas are depleted of physicians, the sick are transported to the city. In the larger centers too often they are shunted from one specialist to another for complete diagnosis when the important diagnosis might have been made by one competent general practitioner trained to treat the patient as a whole rather than to study the component parts of the human body.

2. The shortage of nurses.
3. The ever-increasing number of cases which may be classified as psychoneurotic or psychosomatic illnesses.

In our campaign to educate the citizens of Georgia concerning the accomplishments and the aims and objectives of organized medicine, I believe that we should follow the plan of our own American Medical Association and the majority of State Medical Associations by engaging the services of a full time Public Relations Officer. This officer should work with the Committee on Public Policy and Legislation which will outline and control his policies and duties.

Our own auxiliary is standing by eagerly awaiting the opportunity to assist the Association in any way that we may suggest. Armed with the proper information, prepared by our Public Relations Officer and the Committee on Public Policy and Legislation, they will go into the highways and byways of this State and make the public know that organized medicine has the public welfare at heart.

Then the individual physician too often devotes himself exclusively to looking after his own patients. He should inform himself concerning today's problems of organized medicine and teach his patients that we want their aid in solving their medical and social problems.

The unbalanced distribution of doctors, overspecialization and the high cost of medical care in prolonged illness are problems that have aroused the concern and close study of the President, the members of Congress, the officers of the American Medical Association, the various State Medical Associations and many other economic and social organizations. The greatest minds of the country are seriously studying these problems. I am no Solomon, but I would like to point out to you some of the things that we can do in Georgia.

It seems that the best plan available at present for reducing the high cost of medical care to the people of the low income group is some type of voluntary prepayment medical care plan, perhaps supervised by the Medical Association of Georgia. This type of insurance has passed the experimental stage. It is already in operation in thirty-seven states. Michigan now has more than a million members. Such a plan has the sanction and approval of the American Medical Association; they have a council to assist us in the formation of our agency. We have a splendid committee working on the details of our plan and I hope that it will be in operation as soon as the Legislature passes the enabling act, a necessary law for the operation of such plan.

There are many factors that keep young doctors from deciding on general practice away from the big cities. Among them:

1. The prospect of a low income.
2. Less opportunity for comfortble living conditions, good schools and social contacts for his family.
3. Poor hospitals, if any, and lack of diagnostic facilities.
4. Little opportunity to keep abreast of the times and continue his medical education.
5. The very low rating of the general practitioner by the diplomates of the Specialty Boards, the Army, Navy and Veterans Administration.

The remedy, of course, is to correct the

conditions just named and increase the incentives for the young doctors to locate in rural communities.

Young doctors ready to locate should be able to find medical facilities in rural areas at least comparable with those to which they have become accustomed in student and intern days. This will require the construction of hospitals or some type of medical facility in each trading center, available to all licensed doctors. These should include diagnostic equipment and trained personnel. Four to six centrally localized pathologic laboratories and centers to read x-ray films, maintained by the State, would be, I think, an ideal arrangement. Some men object to this idea because they think it borders on socialized medicine. I see no more threat of socialized medicine in this proposal than in the present State Public Health Laboratories, State Tuberculosis Hospitals and State Institutions for the Insane.

We can raise the standards of the general practitioner by regular courses of postgraduate study, sponsored and operated by the Medical Association of Georgia. Such a course will be started this year. Many states are operating such courses successfully, under full time postgraduate directors.

At the 1947 meeting of the American Medical Association the section on General Practice organized the American Academy of General Practice, copied after the American College of Surgeons. This will do much to give the general practitioner confidence, increased learning and recognition.

The programs enumerated should make general practice more attractive to the medical students and give them greater incentives for locating outside of the cities. In the same ratio, it will reduce the tendency to over-specialization. Yet there is still another cause for this drift toward specialism. Very little is heard of training doctors for general practice. The curriculum of most medical schools today points to specialism or scientific research, with no thought of who is to care for sick people. Dr. George Baehr, president, New York Academy of Medicine, speaks of education for the general practitioner as follows: "Get practical teachers. In our medical schools, the professors are quite properly full time experts, but very few of them have ever practiced medicine. They haven't any idea of the problems of the general practitioner. One is astonished, on coming into contact with them, to see what a poverty of information exists there. The teaching of medicine must be in the hands of men who have some understanding of the problems of sick people. Only a reorganization of our schools' medical departments can achieve this."

In studying the whole problem, I believe that we will all agree that the educational level of the general practitioner determines to a great degree the public's respect for the medical profession as a whole.

A similar condition applies to the acute shortage of nurses, particularly in rural areas. Now nurses are trained only in the large city hospitals. They are so well trained in medicine and medical technic, that upon graduation very few are willing to nurse sick people, except under certain conditions applicable only to the large city hospitals. I favor the reopening of the small approved rural hospitals for nurse training. It does not take a girl with a college degree to make a good nurse. There are hundreds of girls recently graduated from high schools who would welcome the opportunity to train in a small hospital. And, gentlemen, they would make good nurses—nurses willing to nurse the sick in rural areas. In addition, the senior girls in high school should be given a course similar to the nurses aide courses in our large hospitals. Then in time of need they could render

splendid service in assisting the registered nurses. If and when they become wives and mothers, they would be able to carry out intelligently their physician's instructions for the care of their own sick children.

And now to the last problem under discussion, viz: the increase of human maladjustment, with its unprecedented divorce rate and ever-increasing number of neurotics and psychopaths. Every day we see them in our practice, pitiful cases of persons unable or unwilling to adjust themselves to their husband or their home, or their children, or their environment, whatever it may be. They too are our problem —What can we do about it? Our public schools educate our children for breadwinning. They are taught nothing about the most important job in life, viz., to be a wife or husband, mother or father. They receive no instructions that will fit them to be members of a conglomerate society. I favor a course of instruction in our high schools on marital relations and homemaking. I insist that such courses should be installed and required in our public schools, with paid teachers and credit for the hours of instruction.

Progress has been made. Using round numbers, in 1946 our State spent $100,000 on public health, in 1947 more than 20 times as much. The Federal Government contributed $300,000 in 1936, and 6 times that amount in 1947. In this period the death rate per 100,000 dropped: Infant mortality was almost halved, stillbirths more than halved; maternal mortality came down two-thirds; deaths from typhoid fever were but 10 per cent of what they had been, and from malaria only 5 per cent.

One cannot be proud of Georgia's record of rejections in the Selective Service: of white registrants, 46.9 per cent were rejected, the second highest rate in the country; 57.8 per cent of Negroes were rejected, the ninth highest. Or more than 50 per cent of the young men of this State were found unfit for military service. Such conditions demand correction.

At my request, Governor Thompson issued invitations to a meeting in Atlanta last December to the President-elect of this Association, the chairman of the State Board of Health, the director of the Department of Health, the dean of the University of Georgia School of Medicine, the president of the State Nurses Association, and representatives of the Georgia Citizens Council, the Georgia Congress of the Parent-Teachers Association and the Congress of Industrial Organizations. At this first meeting it was brought out that the Board of Regents of the University System is responsible for operating the University Hospital in Augusta; the Department of Health, the Battey Hospital for tuberculous patients and the Alto Hospital for syphilitic patients; the Department of Welfare the hospital for the mentally ill in Milledgeville, and the Department of Corrections the hospital of the Tattnall Prison. A better system of coordinated management is needed. The tuberculosis hospital, where a wonderful job is being done, is not functioning at full capacity because sufficient professional staff cannot be secured. The shortage of doctors at Milledgeville is only too well known. Facilities for taking care of children crippled with heart disease, lesions of the central nervous system or orthopedic conditions, of older people with disabling conditions such as ununited fractures, of the mentally retarded, the epileptics and insane, are utterly inadequate. And we need at least 14,000 more general hospital beds.

The Governor called a second larger and more representative meeting to go more deeply into these and other questions on March 19 and 20. At that time good, forward-looking, but sensible, committees were

appointed to seek ways and means of improving conditions of public health, these committees to make their recommendations to a third meeting in the fall with a view to have them acted on by the Legislature next winter. I want to ask you to study these recommendations earnestly, and to such as you approve (I believe you will approve most if not all) I beg you to give all of your influence and moral backing in order to have them made into laws.

This grand old State must resume her position of leadership: it must guard and promote the health of all her citizens so that we may always exult in saying, "It's great to be a Georgian."

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## BISMUTH THERAPY FOR COLDS

TRACY LEVY, M.D.
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The common cold is still the most debilitating illness from an industrial point of view. There are many and varied treatments, varying from purges to vile tasting "witch's brew". Some are helpful; others make the patient more ill than the disease.

Bismuth, one of the older drugs, is now finding a new use in the treatment of acute tonsillitis and colds. W. Lloyd used sodium bismuth thioglycollate (Thio-Bismol) in the treatment of sore throat with febrile and other catarrhal symptoms involving the nose, pharynx, and larynx. He used 0.1 gm. (1.0 cc.) intramuscularly and found the patient improved in one hour and well in 12 to 24 hours. A second injection was rarely used. No ill effects were observed except for an occasional ache at the site of the injection.[1]

Stovin found that in the treatment of 40 cases of acute tonsillitis, the bismuth salt of heptadienecarboxylic acid was efficacious. The general symptoms and sore throat were usually relieved in 24 to 48 hours. He noted no toxic effects from the administration of one and occasionally two suppositories. Monteiro found the use of bismuth compounds reduced the duration of tonsillitis to 24 to 48 hours instead of 6 to 8 days. Pain, temperature, and malaise rapidly subside; the exudate and swelling of the lymph nodes promptly disappear. Lewis reported the use of bismuth subsalicylate as a "highly efficacious agent in the treatment of most types of acute tonsillitis".[2]

### *Pharmacology*

Bismuth as a drug has no reaction on the unbroken skin, but when applied to a raw surface it forms a protective coat. The salts of bismuth are mildly astringent and feebly antiseptic.[3] After injection, bismuth salts are found in all parts of the body, particularly the tonsils. This may account fos the action of bismuth in cases of tonsillitis. Injected bismuth, both oil and aqueous solutions, act similarly following the introduction into the body. The water soluble compounds tend to precipitate more or less rapidly on contact with the tissues, and then behave like the insoluble compounds. Both types are gradually converted into soluble products, especially by the interaction with the proteins, so that they are both "tissue soluble". There are two other types of bismuth compounds, one marketed under the trade name of "Analbis", and the other an oral product, marketed under the name of "Bistrimate" tablets. Analbis is the salt of heptadienecarboxylic acid and incorporated in cocoa butter as a suppository. Each suppository contains 0.135 Gm. of the bismuth salt of heptadienecarboxylic acid. Bistrimate tablets are a bismuth salt of

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The author wishes to express his appreciation to the G. F. Harvey Company, Saratoga Springs, New York, for their cooperation in supplying the analbis used in this series of cases.

triglycollamic acid. A dose equivalent to 450 mg. of metallic bismuth daily usually gives an adequate therapeutic level.

### *Material and Method*

This work was done from October 1944 through September 1945. It was carried out in New Guinea, the Netherlands East Indies, and the Philippine Islands. The two drugs used were bismuth subsalicylate in oil, and analbis suppositories. Each dose of bismuth subsalicylate consisted of 1 cc. of this drug (containing 0.13 Gm. or 2 grains of bismuth subsalicylate). One injection, with one cubic centimeter of air, was used. Two analbis suppositories were used in each case, one being inserted into the rectum each morning for two consecutive mornings. A series of controls were run equal in number to the bismuth treated cases. A series was not run using bistrimate, as this product was not on the market at that time. Fifty cases were treated by injection of bismuth subsalicylate, and 25 cases were treated by the use of analbis suppositories. This work was conducted primarily to get "grounded" air crew members back into the air as quickly as possible without the danger of otitis media, aerootitis media, or sinusitis.

*Bismuth Treated Cases*:

1. Physical check—history; nose, throat, and ear examination. General check of the heart and lungs, temperature recorded.
2. Bismuth therapy as previously stated.
3. Nose drops and 10 percent argyrol instilled in the nose three times daily, and aspirin 1 Gm. (gr. 15) three times daily.
4. Temperature recorded three times daily, check for objective signs of recovery.

*Controls*:

1. Physical check—history; nose, throat, and ear examination. General check of the heart and lungs, temperature recorded.
2. Nose drops and 10 per cent argyrol instilled in the nose three times daily, and aspirin 1 Gm. (gr. 15) three times daily.
3. Temperature recorded three times daily, check for objective signs of recovery.

### *Results*

All cases were recorded to the nearest half a day. Both subjective and objective signs were used to consider recovery as complete. A careful follow-up was effected to insure complete recovery and to find the effective length of cure. One case contracted another cold at the end of ten days, showing that bismuth does not give immunity for more than ten days.

In cases where bismuth was used in addition to the routine nose drops, argyrol, and aspirin, all objective and subjective signs had disappeared within an average of 60 hours. The patient returned to flying status, and the follow-up was instituted. No cases treated with this method showed any of the complications of colds.

In cases treated routinely without bismuth, the average length of complete recovery was 144 hours or six days. This means that the average time saved was 80 hours, or three and one half days, by the use of bismuth. In industrial medicine this represents a considerable number of man-hours over a period of a year.

It was noted where sinusitis accompanied or complicated a cold, bismuth therapy had no effect on the course of the sinus infection. Several cases of sinusitis without colds were treated by both the injection and suppositories of bismuth with no visible good or bad effects. Several cases of acute and subacute tonsillitis were treated with bismuth. All cases showed relief in a few hours and recovery in 24 to 36 hours.

It seemed to make no difference in the duration of the cold, as many varied from a few hours to several days. The treatment was as effective on the early colds as those whose symptoms had been present for several days. In cases where symptoms had been present more than five days, the results were excluded from this series.

*Addendum*: Since this work was done several cases treated with analbis suppositories terminated fatally. All occurred in children. Several other cases had symptoms of heavy metal poisoning, but recoveries were effected by the use of BAL. These terminal cases were apparently the result of using adult size suppositories on children.[5]

### *Conclusions*

1. Routine therapy consisting of nose

drops, argyrol, and aspirin, when combined with bismuth therapy resulted in cures from colds in an average of 60 hours in 75 cases. In an equal number of controls treated similarly, but without bismuth, an average of 144 hours were required to recover.

2. Bismuth by injection and suppository proved equally effective.

3. Sinusitis is unaffected by bismuth therapy.

4. Bismuth therapy is effective in the treatment of tonsillitis.

5. The mode of action of bismuth on colds to date is not known.

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# EARLY AMBULATION AND RELATED ASPECTS OF POSTOPERATIVE SURGICAL MANAGEMENT

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*Tifton*

In spite of the fact that only in the last eight to ten years has the practice of early ambulation become so popular, it is nothing new. Emil Reis[1] was the first to use it in this country and that was nearly fifty years ago, in 1899. It was not, however, until the third decade of this century that greater interest was shown in this subject, and this was manifested in South America and in Europe, and not in this country. In 1938 several men in this country, Leithauser[2] being one of the leaders, began to practice it with more seriousness until today it is recognized as one of the outstanding principles of postoperative management.

Experience has shown that there are definite reasons for making surgical patients ambulatory early following surgical procedures. These are:

1. Prevention of postoperative complications.
2. It hastens the return to normal of the body physiology.
3. It promotes healing.
4. It decreases hospitalization time.
5. Brings about a more rapid return to normal.

From observation of animals, particularly those subjected to surgical trauma in the experimental laboratory, it has been noticed that they do not lie still but move around, take food and have normal excretory functions of their intestinal and urinary tracts. Newberger[3] in 1943 reviewed the literature of early postoperative walking and his analysis brought out the following advantages: improved morale of the patient, avoidance of asthenia, economy to both the patient and the hospital, simplification of postoperative care, reduction of pulmonary complications four to five fold, avoidance of the use of catheters and laxatives, reduction of adhesions, more rapid normal healing, reduction of thrombosis and embolism. Certainly all of us who have used early ambulation for our patients have been convinced that it has its advantages.

In order to be able to appreciate the practice of getting patients up soon following surgical insult, it is felt that certain general physiologic principles must be understood. Both in health and disease, the function of the body depends upon efficient circulation, respiration, digestion, and the elimination of waste. These functions are disturbed by anesthesia and surgery, and strict immobilization increases this disturbance. Reflexly, from pain and fear the respiratory muscular function is impaired, leading to atelectasis and anoxia: the circulation is slowed leading to shock, thrombosis, phlebitis and embolism, as well as delayed wound healing; the motor mechanism of the intestine is inhibited leading to distention, pain, the absorption of toxins

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and dehydration. These factors, with inactivity superimposed, delay recovery and may even go so far as to carry the patient over the threshold. However, if the patient is encouraged to move around, his pain is short-lived, his body functions normally, healing is more rapid and complications are avoided.

Let us try to clarify what is meant by early ambulation. For some patients it means walking two to three hours postoperatively, and for others it merely means having them perform certain exercises in bed. It is obvious that rest and exercise should be balanced, for either, if prolonged, will produce harmful results. Too much exercise will result in exhaustion, and too much rest will produce atony. Both of these delay healing.

It is known that many postoperative complications are apparent or incipient within the first twenty-four hours after operation, so the time to prevent their occurrence is immediately after operation, and not four to five days later. In elderly patients and those that are not able to be classified as good surgical risks, only simple exercise in bed should be used the first day; these exercises should consist mainly of flexing and extending the knees and ankles and wriggling the toes. Stronger patients can be got out of bed on their feet in two to three hours after surgery depending upon the anesthetic. It is highly recommended that patients be made to cough in the standing position the first time they get up; the reason is that they are better able to remove mucus plugs from their bronchial tree.

Do not get the idea that early ambulation is a panacea. Basic surgical principles such as gently handling of the tissues, anatomic incisions, appropriate choice and application of suture materials, asepsis and maintenance of water and electrolyte balance must be foremost, if any surgical procedure is to be successful. Minimum trauma to tissue, hemostasis and asepsis are "musts".

Anatomic abdominal incisions are of great importance in healing as well as reducing pain and muscle spasm. Transverse incisions or transverse bordering on the oblique come nearest to answering this criterion. Such incisions split the fibers of the transversalis muscle and its aponeurosis (the posterior rectus sheath) retaining the integrity of the muscle, so that when it contracts it closes the incisional gap and does not put strain on the suture line. The midrectus incision cuts the end of the fibers of the posterior rectus sheath which is not interwoven and will not hold sutures securely. The midline incision is not anatomic, but in the midline the entire aponeurosis is fused and the fibers, being interwoven, will hold sutures well.

The question of suture material is one that will always bring differences of opinion. Suture material is a foreign body and as such produces tissue reaction. Of the popular suture material, catgut causes the most reaction, silk next, then cotton and thin wire. So if catgut is to be used the smaller gauge 00 or 000 chromic is recommended. Non-absorbable material is practically a *must* since tensile strength must be maintained and tissue reaction kept at a minimum. I once heard an outstanding surgeon, after being repeatedly asked about suture material, say: "Just put the edges together with anything, and God will heal it". That is quite true, but let us be wise in the selection of suture material.

I have been using early ambulation for my patients for about two years and I can assure you that I have been very favorably impressed with it. At present I have my patients sit up on the bed and cough as soon as they have reacted from anesthesia. This varies from three to eighteen hours. I try to get all of them up on the second day,

have them walk across the room, then get back in bed themselves. I like to get them out of bed the first time myself, because if it is left up to the nurses, the patients are apt to be more apprehensive and fearful. After they get out of bed the first time, and they see how well they feel and get around, I encourage them to use the bathroom. This entails more walking, and from then on they are up as they desire. By so doing, normal bowel and urinary function is maintained, laxatives or enemas are seldom necessary, they do not become so weak and they go home in three to seven days after surgery. I also practice early ambulation in my obstetric cases.

Many patients, like many doctors, are skeptical about getting up early. I have found that if patients for elective surgery are told beforehand that I will expect them to get up early, explain to them that they will do better and go home sooner, they are much more cooperative. After they find out that they are able to be up and walk around they are very pleased. The use of hypos has been greatly decreased. I have experienced no wound disruption, thrombosis or embolism and practically no abdominal distention.

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# XANTHOMATOUS TUMORS OF THE ACHILLES TENDON

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There have been 9 recorded cases of xanthomatous tumors of the Achilles tendon, 7 in females and 2 in males.[1] A tenth case is recorded here, the third in a male.

Presented at staff meeting of Donalsonville Hospital, March 25, 1948.



**Figure 1**
**Xanthoma of left elbow, involving triceps tendon.**

## CASE REPORT

A white male, 37 years of age, was admitted to Donalsonville Hospital February 20, 1948. His father died at 52 from stomach trouble; his mother, aged 68, and 5 brothers and 3 sisters are living and in good health. The patient was born and reared on a farm in Seminole County, Georgia, where he still resides. In early childhood he had measles, mumps and whooping cough and also several attacks of chills and fever. In 1931, at the age of 20, he was very sick with a continuous fever for 8 weeks and during this illness all of his hair came out. While convalescing from this fever he began to notice a tightening and abnormal growth of his heel-strings, which reached their maximum in growth and their discomfort in relation to walking about 5 years later. Since 1936 there has been a gradual decrease in discomfort from the thickened heel-strings and the patient believes that they have decreased in size. Concurrently with the involvement of the heel-strings, numerous small nodules appeared on the fingers of both hands and have shown no increase in size in the past 12 years. With the cessation of growth of the tumors on the heel-strings and fingers, about 1936, a tumor appeared on the left elbow and has been progressively increasing in size. Five years later, in 1941, tumors appeared on the buttocks and right knee and have been increasing in size since their appearance was noted. No discomfort is experienced from the tumors of the heel-strings or fingers, but considerable discomfort is caused by the tumors on the buttocks, left elbow and right knee.

Physical examination: A white male, aged 37, well developed and well nourished, 68 inches in height, weight 158 pounds. Multiple rounded, hard, tumors from a few millimeters to about two centimeters in diameter are noted on the extensor tendons of the left index and middle fingers and the right thumb, index, middle and ring fingers, which are not painful

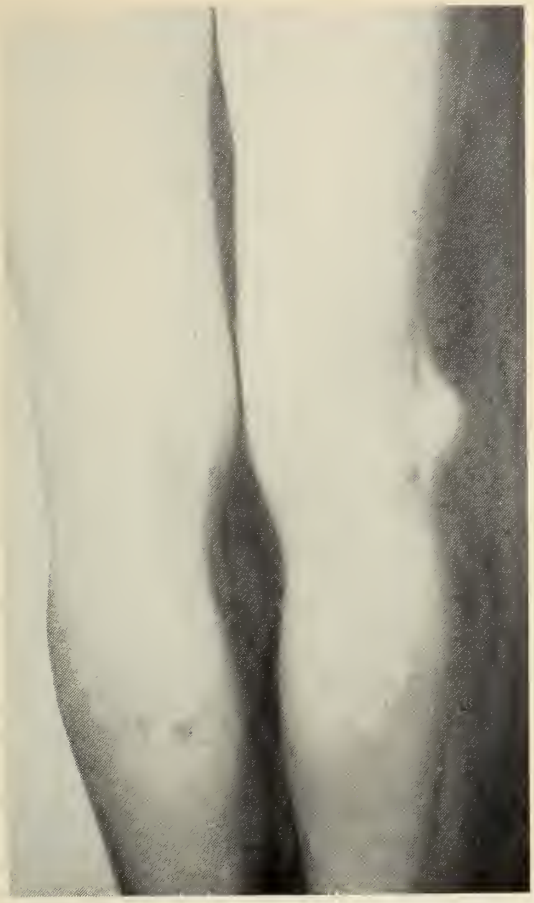


Figure 2
Xanthoma of right knee, involving biceps tendon.

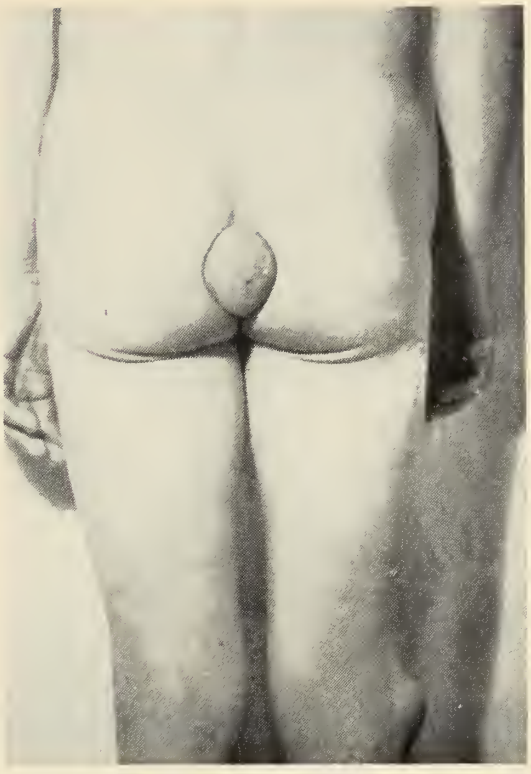


Figure 3
Xanthoma arising from sacrococcygeal ligament.



Figure 4
Xanthoma of Achilles' tendons.

and which do not interfere with finger movements. On the left elbow (Fig. 1) a hard, rounded, tumor about the size of an orange seems to be attached near the insertion of the triceps tendon and does not interfere with joint motion. Between the folds of the buttocks (Fig. 3) there is another hard tumor corresponding in size and shape to a semi-flattened orange, and which has a small ulcerated area in its center. Another rounded tumor about the size of a small lemon is located on the posterolateral aspect of the right knee near the insertion of the biceps tendon (Fig. 2). Both Achilles' tendons are of bony hardness and about 2.5 cm. in thickness and 5 cm. in width from origin to insertion (Fig. 4). The feet of this patient were examined by me in 1936, at which time more discomfort was experienced in walking than at the present time. Laboratory examinations were as follows: Kahn test of blood was negative; hemoglobin 16 Gm.; red blood cells 4,600,000; white blood cells 6,000 with 72 percent neutrophils and 28 percent lymphocytes; blood sugar 110 mg.; N.P.N. 32 mg.; cholesterol 337 mg., specific gravity of urine 1.016 and negative for albumin and sugar. Excretory urograms showed normally outlined and functioning kidneys.

A preoperative diagnosis of xanthomatosis was made and under inhalation anesthesia the tumors from the left elbow involving the triceps tendon, the right knee involving the biceps tendon, and the buttocks involving the sacrococcygeal ligaments were excised and primary closures made. Because no discomfort or interference with work was caused by the tumors of the extensor tendons of the fingers or the tumors of the Achilles tendons, these tumors were not excised. The pathologic report on the removed tissues was rendered by the Department of Pathology, University of Georgia School of Medicine as follows: "1. From left elbow: Subepithelial xanthoma 7.5 cm. in diameter and partly covered by a large section of skin. Areas of hyaline

necrosis with numerous cholesterol clefts. 2, From sacrococcygeal ligament: Ovoid subepithelial xanthoma measuring 8 x 5.5 x 3 cm.; extensive necrosis and hyalinization. In the center of the covering section of skin there is a deep area of ulceration and chronic inflammation 0.5 cm. in diameter. There is a similar smaller area of ulceration adjacent to it. Hyperplasia of the adjacent epithelium. 3. From right popliteal space: Ovoid xanthoma measuring 5 x 4 x 3 cm.; extensive necrosis and hyalinization."

The patient was discharged from the hospital on February 25, 1948, 5 days after admission. Skin sutures were removed 5 days later and the patient was again seen on March 10 and March 17 with completely healed operative wounds.

### *Discussion*

A detailed review of xanthomatous tumors of the tendon sheaths by M. S. Friedman appeared in the July 1947 issue of *The Journal of Bone and Joint Surgery*. As stated by Friedman, the nature of xanthomatous lesions has long been a subject of controversy and they have been described as true neoplasms, as inflammatory lesions, as representing reaction to local trauma or infection, and as the result of a disturbed cholesterol metabolism.

### *Summary*

A case of xanthomatosis in a white adult male in which both Achilles tendons are involved is reported. Only 9 cases of xanthomatous tumors of the Achilles tendon, 7 in females and 2 in males, have previously been reported.

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## HEALTHGRAMS

Current statistical data on tuberculosis mortality rates are not an index of current infection and morbidity. Nor, in fact, are they a measure of the effectiveness of current control efforts. They are merely the expression of the relative condition or state of these factors at some time in the recent past. In similar fashion, we may assume that the tuberculosis death rate of the future will reflect the present universe of environmental control and human resistance and susceptibility. Francis J. Weher, M.D., Ed., Pub. Health Rep., Feb. 6, 1948.

* * *

General hospitals should admit all contagious diseases that need hospital care. This would eliminate expensive contagious disease hospitals that are practically empty half the time. Tuberculosis is becoming more and more a responsibility of the general hospital as the disease is detected earlier and treatment is much the same as for any other acute illness. Graham L. Davis, Bull. Am. Coll. Surgeons, January, 1948.

# AMEBIC ABSCESS OF THE LIVER

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Amebiasis has been considered endemic of tropical or subtropical areas. This is probably not true. Since there was a prevalence of the disease among members of the armed forces, an increased incidence is expected with the return of these men to their communities. Many cases have perhaps gone unrecognized or were considered as insignificant diarrheas only to have demonstrated the late stages such as amebic hepatitis, absecesses of the liver and of other organs. The seriousness of this condition and the necessity for its early recognition should make one more alert to its possibilities.

In a review of many cases of amebic liver abscess one is struck with the insidious and progressive manifestations of the disease. Often with careful observation and awareness, accurate diagnosis cannot be made until the process is advanced and the chances of cure have been seriously hindered. The diagnosis is not always easy. The history is of some importance but the findings do not always corroborate one's suspicion of the disease. The knowledge of the disease has progressed and an accurate understanding of the pathologic processes are at the present time well known.

In the United States it is generally accepted that from 5 to 10 per cent of the population harbor *endamoeba histolytica*.[1] It is by far one of the most important diseases in the tropical areas. From a military standpoint, it is of concern and of paramount necessity in the prevention of the disease and the preservation of manpower.

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Particularly is this true under the living conditions that the average soldier has while participating in war.

In 1875 Losch[2] was first to suggest that amebae perhaps were the cause of many of the dysenteries. This suggestion, however, was not well received due to the fact that all dysenteries do not have amebiasis. It was not until 1891 that the etiology of bacillary dysentery was clearly defined and in 1903 Schaudinn demonstrated the existence of nonpathogenic amebae.[3] It is essential to remember that there exist two forms of amebae, the *endamoeba coli* which are found in the stool and never in the tissue of the host, the characteristics of which are that it has a granular protoplasm, is sluggishly motile, and the cystic forms contain eight nuclei. Ingested red blood cells are not found in this type. *Endamoeba histolytica* is the pathogenic form which can be demonstrated in the feces and the tissues of the host. It is actively motile and frequently contains red blood cells. The cystic form has four nuclei.

The disease is spread by the excretion of the parasites and cysts in the feces. The parasites die rapidly and the cysts propagate the disease from man to man. Excystation occurs in the small intestine and four nucleated amebae emerge from each cyst. The amebae are arrested at the point of stasis in the large bowel, chiefly the cecum, ascending colon, sigmoid flexure and the rectum.

The primary lesion, therefore, is within the large intestine and in long standing disease ulceration may extend along its entirety. The amebae may injure, penetrate, and then rapidly invade the submucosal layer. The subsequent necrosis of the overlying mucosa produces an ulcer with undermined edges. Microscopic examinations will show the presence of amebae in large numbers, frequently within the blood vessels. The ability to invade the blood vessels and produce distant metastatic abscesses in other organs brings the disease into the field of surgery. Since the large intestine is primarily drained by the portal system, the first major organ to be affected by these metastatic processes is the liver. It is with this organ that we are primarily concerned in this presentation. Hepatitis and liver abscess secondary to intestinal amebiasis occur in approximately 4 to 5 per cent of the cases.[4]

It is thought that the small portal radicles become infarcted by the amebae and subsequent focal necrosis appears. These areas characteristically appear in the portal spaces and extend peripherally toward the capsule.[5,6] Thus the way is paved for cytolytic activity of the amebae to produce lysis and destruction of the involved hepatic parenchyma. In this phase a balance exists as in all infections between regression toward healing with replacement by scar formation and a progression toward abscess formation. The fundamental principles of tissue immunity and wound healing determine this course; namely, the resistance of the host, and the virulence and number of the invading organisms. If the resistance of the host is lowered by concurrent diseases, trauma, or alcoholism, the occurrence of an abscess is more serious.[7] The presence of secondary infection increases the progression of the disease. When the hepatitis continues to abscess formation the contents will be the so-called "chocolate sauce". This material is characteristically reddish-brown in color, glary in consistency, and is found to contain broken down liver tissue and blood cells. Viable amebae are seldom found in this fluid but can be demonstrated in the wall of the abscess. There is little infiltration of the wall with leukocytes and few are found in the fluid.[8] Therefore pure amebic abscess is not a true abscess but an area in which liquefaction and necrosis of the tissues have occurred. Due to the avenues of drainage approximately 85 to 95 per cent of all amebic abscesses are found

in the right lobe of the liver and from 65 to 85 per cent of all such abscesses are solitary in nature.[8 11]

The clinical manifestations of amebic abscesses and hepatitis vary greatly. It is thought that these complications occur in the early course of intestinal disease. However, they have been known to be manifested months or years later.[1 12] The most important systemic presentation is that of a low grade intermittent or remittent fever.[13] This occurs in approximately 85 per cent of the cases.[8 14 15] Approximately one patient out of four will have an associated diarrhea and less than 7 per cent give a history of antecedent diarrhea.[16] Jaundice occurs in about 10 per cent of the cases.[8 17 18]

Local manifestations are pain and tenderness in the region of the liver. This is particularly true when the capsule is involved, and the pain will be referred to the back and right shoulder. Pain and tenderness are present in about 85 per cent of the patients.[8] Enlargement of the liver can be clinically demonstrated in approximately 75 per cent of the cases.[8 16]

Unfortunately, the laboratory findings are of no great diagnostic aid. There is moderate leukocytosis, and most patients have a secondary anemia.[8] The frequency with which amebae can be demonstrated in the stools depends on the care, the technic, and the number of stools examined.

Roentgenography is of importance and is the most dependable procedure in the diagnosis of amebic abscess of the liver.[20] To be of maximum value the diaphragm should be examined fluoroscopically as well as by films in the anteroposterior, the lateral and the oblique positions. The diagnostic features are the changes demonstrated in the shape, position and mobility of the diaphragm. Unless the x-ray examination is complete as outlined above, an elevation of a portion of the diaphragm can easily be overlooked. Though a positive diagnosis cannot always be made, a diagnosis of liver disease with perhaps such causative factor can be suspected.

It is of utmost importance then that one consider amebic hepatitis in all patients who have a low grade daily intermittent fever, pain and tenderness over the liver, and moderate leukocytosis. When this clinical picture exists following an attack of dysentery, either with or without demonstration of amebae in the stools, one's suspicion should be strengthened. Repeated examination of the stools should be continued in an effort to establish or rule out the disease. During the period of early hepatitis, thereapy is most beneficial before subsequent progressive necrosis has occurred.

When the disease has progressed to abscess formation, there still is a great variation in the clinical picture. With an enlarged liver, pain and tenderness over the liver area, or radiation to the right shoulder and intermittent or remittent fever, suspicion should be greater. At this time further corroboration is necessary by the use of proper x-ray examination, which has been cited before, even without being able to demonstrate the presence of parasites in the stools. The proof will consist in obtaining some of the characteristic material from aspirated contents. The method of obtaining such material is through the use of an exploratory aspirating needle. It is well that one be aware that this is a surgical procedure and must be treated as such. The aspiration should be intelligently undertaken, using the safest and easiest methods for obtaining a specimen of the contents of the abscess. The localization of the site of the involvement must be complete. The patient must be prepared as in all surgical procedures. Preferably he should be taken to the operating room, and only with sterile precautions should the aspiration be undertaken. It is best to use a short bevel needle

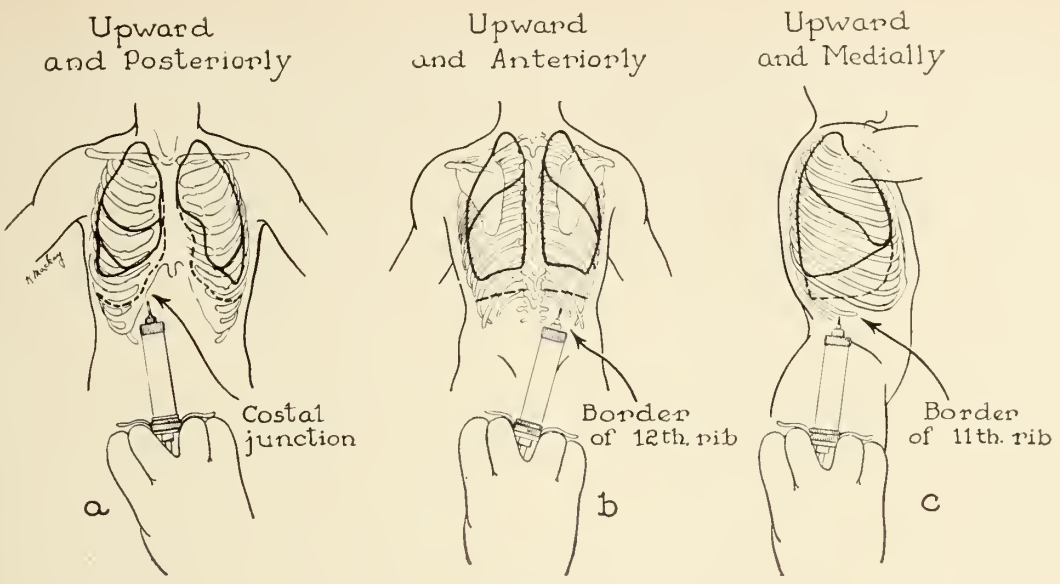



**Figure 1**
**Diagram showing method and position of aspiration of amebic abscess.**

2 mm. in circumference and not longer than 10 cm. The reason for having the patient in the operating room is that should one encounter an associated secondary infection, treatment should consist in open drainage, whereas such is not the case in amebic abscess. Moreover, the possibilities of the associated dangers are of no little concern. They are: first and foremost, the problem of hemorrhage; and second, the danger of spreading the disease either into the general peritoneal cavity, the pleura, or into other areas of the liver itself. It is agreed that the problem of hemorrhage during aspiration is a real one and must never be minimized. Infection can be lessened to a certain degree by previously administering in subcutaneous daily doses 0.065 Gm. of emetine hydrochloride daily for at least two to four days before attempting exploratory aspiration. This danger can also be minimized by intelligent preoperative planning, localization of the abscess and the proper use of the diagnostic aspirating needle.

The method of aspiration and location depends on previous diagnostic studies. The needle should enter the abscess by the shortest available route and should not pass through the pleura or peritoneal spaces. The pleura can be easily avoided. The passage of the needle through the peritoneal cavity cannot always be prevented. If the liver is enlarged near the dome of the diaphragm, fixation with adhesions usually occurs between the liver and the surrounding structures. In these instances the needle seldom passes through the peritoneal cavity. If the abscess lies anteriorly, the needle can be introduced below the twelfth rib and passed anteriorly and slightly upward. If the abscess is below the dome of the diaphragm, the introduction of the needle can be in the left interspace in the anterior axillary line. The manner of introduction of the needle should always be determined prior to the time of aspiration. If one fails to obtain material at the time of aspiration, it is necessary to withdraw the needle from the liver before making further introductions. This is obviously to avoid spread of infection and in order not to unnecessarily traumatize the liver and produce hemorrhage. The problem in treating these abscesses then becomes of paramount importance. Prior to 1870 the patients were treated by sup-

portive measures, and recovery occurred only in those individuals in whom spontaneous rupture took place. It has been estimated that 80 per cent of the patients so treated failed to survive the disease. From 1870 until the past few years the standard treatment was opening and draining the abscess, whether it was secondarily infected or not. This, too, carried a high mortality rate which varied from 20 to 40 per cent.[8] The third type of therapy, a more recent one, has been shown by DeBakey and Ochsner[8] in a series of 83 patients to result in a mortality of only 3.6 per cent. This form of treatment is essentially the institution of emetine therapy prior to aspiration, and on the third or fourth day aspiration is done for diagnostic as well as evacuation purposes. Aspiration is repeated periodically depending on the amount of fluid obtained, the ability to remove the material, and further accumulations. Ordinarily no drugs are introduced into the abscess cavity, with the possible exception of those which are secondarily infected with organisms which are sensitive to penicillin.[13] The emetine therapy is continued following the aspiration. This is administered with considerable caution, realizing the potential dangers to the heart muscle in patients so treated. The maximum amount should not exceed 10 mg. per kilo of body weight during any course of therapy.[21] The other amebacides, such as carbarsone, acetarsone, treparsol, or quinoxyl, are more effective than emetine in the treatment of amebiasis. It is necessary, therefore, that patients with this condition be given a course of one of these amebacides following emetine therapy to attempt eradication of the primary focus.

The following case reports are presented to emphasize the difficulties encountered in treating these patients, and to point out the results in those advanced cases usually seen in the city hospitals:

## REPORT OF CASES

*CASE 1:* J. W., male, aged 51, admitted to Grady Hospital with the history of having had pain in the abdomen for three weeks. The patient had marked jaundice. Temperature readings were 103 to 104 F. There was no history of diarrhea prior to admission to the hospital. Examination of fresh stools revealed *endamoebae histolytica.* There was evidence of fluid in the right chest and marked elevation of the right diaphragm. Aspirations were performed on six occasions, removing a total of 6750 cc. of typical "chocolate sauce" material. Two courses of emetine hydrochloride were given with apparent quiescence of the disease. The patient was examined four years later and no evidence of the disease could be demonstrated.

*CASE 2:* E. W., male, aged 32, admitted to Grady Hospital with severe abdominal pain of six weeks' duration. His temperature varied from 101 to 103 F. There was evidence of fluid in his right chest, with the coughing up of considerable blood-stained sputum. No history of previous diarrhea could be obtained. The condition became progressively worse. Jaundice developed towards the end of the illness which terminated in death. Autopsy findings revealed a solitary abscess in the right lobe of the liver which communicated with a lung abscess through a perforation in the diaphragm. Examination of the wall of the abscess revealed *endamoebae histolytica.*

*CASE 3: H. L.,* male, aged 21, admitted to Grady Hospital with history of pain in his right shoulder, fever, and malaise of two months' duration. The pain became progressively worse. Examinations of stools were negative. There was considerable tenderness in the upper abdomen, and in spite of the fact that the patient was in the hospital for approximately two weeks before death, a diagnosis had not been made. Two days before death the abdominal pain became much more severe. Patient developed a state of collapse, associated with a peritonitis, and died. The autopsy revealed a solitary amebic abscess of the liver with perforation through the diaphragm into the right lung. The immediate cause of death was the perforation of an amebic ulcer in the sigmoid colon with a general peritonitis.

*CASE 4:* A.J., male, aged 33, admitted to Grady Hospital with pain in the right upper abdomen and right shoulder, and fever of nine days' duration. The liver was found to be markedly enlarged and extremely tender. Aspiration was performed in the anterior axillary line, obtaining 50 cc. of yellow pus which was thought to be of pyogenic origin. Stage drainages of the abscesses were accomplished, obtaining a large amount of thick greenish pus. This was thought to arise from the right subdiaphragmatic space. The patient failed to survive the second stage of this procedure and died a few hours postoperative. Autopsy revealed an amebic abscess involving the right lobe of the liver. There was an ulceration in the ascending colon around which there apparently had been some leak with subsequent local peritonitis. Examination of the ulceration in the wall of the colon revealed *endamoebae histolytica.*

## *Discussion*

The presentation of these patients is not made to demonstrate the course of events as much as to present the problem involved in treating the advanced cases. It is certainly not easy to diagnose these conditions in any stage of the disease as was demonstrated in Case 2. In those cases, as was shown by Case 1, where the condition was

suspected and proper treatment instituted, results can be favorable. However, as was shown in Case 3, even with prolonged observation and in spite of treatment, the results are not so favorable.

*Summary*

1. Amebiasis, which was originally a tropical disease, is probably world wide in distribution at the present time.

2. An increased frequency of the disease can be expected since so many men from the armed forces have been released and have returned to their civilian status.

3. The diagnosis of the condition can only be made when one is cognizant of its possibility and after repeated search for, or disproval of, its existence.

4. The presence of pain, the history of low grade remittent or intermittent fever, with an enlarged, tender liver either with or without history of diarrhea, should make one suspicious of the disease. X-ray examination of the liver both with films and fluoroscopic visualization can be of aid. The elevation or fixation of the diaphragm is of significance.

5. The diagnosis can be proved by exploratory aspiration into the suspected areas.

6. The proper pre-aspiration preparation must be instituted if spread of the disease and the complication of hemorrhage are to be avoided.

7. Repeated aspiration without open surgery carries the lowest mortality for these conditions. However in the presence of secondary infection in the abscess, open drainage may become essential.

8. The judicious use of emetine hydrochloride in daily doses of 0.065 Gm. subcutaneously, never to exceed a total of 10 mg. per kilo of body weight for any one course of treatment, is beneficial in eradicating the infection within the liver. The danger of this drug to the heart muscle should not be minimized and one should proceed with its administration with caution.

9. The use of intestinal amebacides, such as carbarsone, quinoxyl, acetarsone or treparsol, should follow the course of emetine hydrochloride therapy in an attempt to eradicate the primary focus of the disease in the large intestine.

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# CHRONIC LYMPHATIC LEUKEMIA OCCURRING SIMULTANEOUSLY IN BROTHERS

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A review of the literature and a personal communication with Dr. Roy R. Kracke of Birmingham, Alabama, revealed no previous report of chronic lymphatic leukemia occurring simultaneously in two members of the same family.

The following report of cases refutes our previous conception that leukemia never occurs simultaneously in a family, and

should serve to emphasize the importance in the future of checking all members of a family when the disease is recognized in any member.

The first brother, Mr. G. H., aged 59, was first seen April 12, 1945. His chief complaint was pain in the right side of his face, and a breaking out on it. The present illness had begun two days previously. The past medical history revealed the diseases of childhood and a right hernioplasty three years previously. Family history was negative. Physical examination revealed a white male, height 68 inches, weight 186 pounds, blood pressure 140 over 90, pulse rate 80, respirations 18. There was an extensive and typical gangrenous herpes zoster involving all branches of the right facial nerve. The spleen was palpable one fingers' breadth below the left costal margin. No superficial lymphadenopathy was felt.

The other brother, Mr. F. H., aged 52, was first seen on April 21, 1946. His chief complaint was pain in the chest and across his back when he took a deep breath. The present illness began one week previous, apparently with a cold. The past medical history revealed the usual diseases of childhood and an appendectomy 15 years ago. The family history was negative. Physical examination revealed a white male, height 66 inches, weight 112 pounds, blood pressure 120 over 80, pulse rate 90, respirations 22, temperature 101.0 F. There was a generalized cervical, axillary, and inguinal lymphadenopathy. There were many moist crepitant rales throughout the chest. The spleen and liver were three fingers' breadth below the left costal margin. The chart shows a camparison of the laboratory findings of the two brothers:

| G. H. | | F. H. | |
|---|---|---|---|
| W. B. C. ranged from 80,100 to 138,350 | | W. B. C. ranged from 51,700 to 145,750 | |
| Differential: | | Differential: | |
| Large Lymphs. | 2% | Large Lymphs. | 2% |
| Small Lymphs. | 84% | Small Lymphs. | 89% |
| Polys. | 8% | Polys. | 1% |
| Baso. | 1% | Baso. | 2% |
| Basket cells | 5% | Basket cells | 6% |
| Hemoglobin | 78 to 96% | Hemoglobin | 64 to 74% |
| R. B. C. ranged from 4,190,000 to 4,490,000 | | R. B. C. ranged 3,290,000 to 3,930,000 | |
| Urine | Negative | Urine | Negative |
| Kahn | Negative | Kahn | Negative |
| Sputum | Negative | Sputum | Negative |
| X-ray chest | Negative | X-ray chest, see below* | |

*Comment*

As far as could be ascertained this is the first record of chronic lymphatic leukemia occurring simultaneously in two members of the same family.

* January 22, 1946—Slight to moderate increased thickening radiating from hilus well into both lungs, slightly more on the right than left side.

* February 13, 1946. Left lung is about the same as on previous examination. Right lung shows apex to be almost consolidated and there is an area about 1½ to 2½ inches in the middle third, and a smaller area in the base, that is almost consolidated, probably large lymph nodes.

Mr. F. H. died Oct. 25, 1947. A check of the blood of all the other members of the family was normal.

*The JOURNAL would like to record the scientific work of Georgia physicians. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

# THE PHYSICIAN AND PUBLIC RELATIONS

GROVER MIDDLEBROOKS
Attorney at Law
*Atlanta*

When I was requested to talk for a few minutes to you tonight I was given the privilege of selecting any subject I desired. The subject chosen—Public Relations—is one which has been talked about and written about and the importance of which has been emphasized in recent times, not only by the medical profession but by many other professions and businesses. Industry long ago realized and appreciated the harm and financial loss that bad public relations produce, and has sought and obtained the advice and services of expert public relations counsel. The Rockefeller interests had its Ivy Lee; baseball had its Judge K. M. Landis, and now it has former Senator Happy Chandler; the movie industry had its Will Hayes—all for the purpose of bettering public relations. And now in organized medicine you will find a belated but rapidly growing realization of the importance of this subject.

What does "Public Relations" mean? I read that a contest was conducted in a trade paper for the best definition of that term. The winning definition was: "Public Relations is a continuing process by which the management endeavors to obtain the good will and understanding of its customers, its employees, and the public at large—inwardly through self-analysis and correction, outwardly through all means of expression."

Another definition was "Public relations is the continued process of keying policies, services, and actions to the best interests of

Address at the annual banquet of the Medical Association of Georgia, Biltmore Hotel, Atlanta, April 29, 1948.

those individuals and groups whose confidence and good will an individual or institution covets, and secondly through the interpretation of these policies, services and actions to assure complete understanding and appreciation."

From these two definitions a member of your profession from Pennsylvania has taken the best thoughts and applied them to the field of medicine in preparing a splendid definition of public relations, which is:

"Medical public relations is a continuous process by which the medical profession endeavors to obtain the confidence and good will of the public—inwardly by self-analysis and correction, to the end that the best interests of the public will be served, and outwardly by all means of expression so that the people will understand and appreciate that their welfare is the profession's guiding principle."

The medical profession collectively and individually is giving its best thought to accomplish the means of obtaining and retaining and deserving the good will of the public. That has always been the goal of every successful individual, group, profession or industry. No individual is successful unless he has his own self-respect and the self-respect and good will of those with whom he comes in contact.

No profession has done more to obtain and deserve the everlasting gratitude of mankind than yours. The scientists by their experiments discover new methods of attacking enemies of the human race. The doctor applies the discovery to aid all mankind. All laymen should have a better knowledge of the fascinating and dramatic history of medicine.

The family doctor and the general practitioner has always been your ambassador of good will. The patients of the fast disappearing family doctor knew that he was their friend and adviser, not only in medical matters, but in various problems upon which their happiness depended. His patients felt and believed that he lived up to his time honored oath to "Follow according to his ability and judgment whatever he considers for the benefit of his patients, and to abstain from whatever is deleterious or mischievous."

With the passing of the family doctor, and the migration of the people to the cities, and the division of the profession into so many specialized fields of medicine, and the scarcity of doctors in some sections, and the increasing costs of medical education, and the scarcity of nurses and the increasing costs of hospital facilities and the resulting increasing costs of medical services, we hear at times words of criticism and in some quarters a demand for some kind of socialized or governmental medicine or a change in the present system which would bring medical services and hospital facilities within the reach of a greater number of people and at prices which they can afford to pay. Various medical associations are experimenting with different forms of prepayment plans under which the system of free enterprise is retained and yet medical services are made available to a large group of the public through systematic savings. Plans like this, as you know, would be termed insurance and would require special legislation for an association to operate under that plan without making the deposits now required of insurance companies.

All of these changes have awakened in the profession a desire, prompted by the sincerest of motives, to maintain and to keep the good will of the public and to demonstrate by precept and by various modes of expression that the primary aim of the profession is to protect, preserve and improve the health of every individual, and that that can best be done by continuing the profession as a private one and not one practiced by governmental agencies.

What, then, is the doctor doing collectively and individually, and what should he do to maintain and preserve and deserve good public relations?

The American Medical Association, the various state and local medical associations and societies, as you know, are at the present time carrying out campaigns through the press, by mail, through the radio, by public speakers, by pamphlets, in cooperation with schools, chambers of commerce, civic organizations and clubs and boards of health and governmental agencies, all for the purpose of improving the health of the people and causing them to realize that the doctors' chief aim is to better health conditions and that it can best be accomplished by free enterprise instead of state medicine.

It is refreshing to see the increased activities in public relations by the women's auxiliaries. They can and do cooperate with various organizations of women who are seeking to improve health conditions, such as Parent-Teachers Associations, League of Women Voters, Y. W. C. A., and others. With the guidance of the doctors their help is invaluable and has unlimited possibilities.

All of the activities of organizations, groups of doctors and of organized women's auxiliaries are important and do play a big part in maintaining good public relations. However, those activities alone are not enough. Good public relations cannot be bought with money, or with advertising, or radio programs, or with any of the things which are now being done or which may be done by groups. The individual doctor in his daily contacts with people—not only with his patients, but with everyone with whom he comes in contact—has it within his power to determine whether the public relations between the public and the profession are good or bad.

If I were called upon as a layman to suggest what the individual physician should do to obtain the good will and confidence of his patients, I would make certain suggestion which we all know would not only create good will, but would tend to avoid damage suits for malpractice:

First: The physician must deserve the good will of his patients. To do that he must give his whole heart and mind and conscience to his cases and devote his highest efforts to the performance of his duty to his patients.

Second: He must be careful of his diagnosis and must avail himself of the help of every diagnostic aid which science has placed at his disposal. If he has an honest doubt as to the correctness of any diagnosis, he should not hesitate to call in another doctor in consultation to confirm his diagnosis.

Third: He must not undertake any treatment or operation if there is any doubt in his mind as to his ability to give the treatment or perform the operation.

Fourth: He must keep careful records and in case of operations he should, wherever possible, obtain the written consent of the patient or the patient's husband, parents or guardian. No operation should be performed without the express consent of the patient or someone authorized to act for the patient.

Fifth: Many litigated cases grow out of x-ray therapy and diathermy. A doctor should not go into that field unless he thoroughly understands it.

Sixth: Keep abreast of the times through the medical journals and the new text books, and your conventions.

Seventh: Be tactful and do not talk too much and be conservative in making a prognosis, and do not criticize your fellow practitioners. When you see results of another physician's treatment you have the benefit of hindsight which he did not have. Careless remarks frequently arouse bad will on the part of a patient toward a former physician and often result in malpractice cases which otherwise would not have been filed.

Another reason why a doctor should maintain good relations with his fellow doctors is that oftentimes the public is not a good judge of a doctor's skill and ability and the public is more likely to give its confidence to those who stand well with their professional brethren and to those chosen by their brethren to honorable offices and whose writings and teachings they esteem.

Eighth: Do not undertake treatment of a case or promise to respond to a call if other patients have prior claims to your time, making it impossible for you to fill your engagement promptly and with proper care. The fact that a doctor has more patients than he can properly care for, and his attendance upon other patients prevents his responding to a call he has agreed to make, not only is no excuse in law but engenders bad will.

Ninth: Do not overcharge for your services. I know that as a rule doctors do not overcharge and in many cases either make no charge at all or a smaller charge than their services are worth. One overcharge will create more bad will than almost anything a doctor can do and in my opinion in cases of doubt it is far better to undercharge or fail to charge than to overcharge. Patients who are able to pay their doctors' bills and who do not do so should be made to pay, but occasionally doctors place bills in the hands of collection agencies or lawyers or bookkeepers who sue patients who are unable to pay, or whose forced payment would work a hardship on them. That also is a prolific source of bad will.

Tenth: Keep your patients' affairs to yourself, but if you are called upon by your patient, or by his adversary, to testify in court about your patient, do not be an advocate. State the facts fairly, truthfully, and modestly and impartially. Lawyers are advocates when arguing, but they are supposed to be stating contentions, not facts under oath.

Eleventh: Specialization, of course, affords better opportunity for treatment of disease but it results more or less in the isolation of the specialist from the people. You hear complaints that people would like to see the physician become more human and be more willing to come into their homes in cases of sudden illnesses.

Twelfth: The doctor should take an active interest in his local, state and national medical associations. As a good citizen he should take an interest in civic affairs and in his church and in every movement which is for the betterment of his community and which will show the public that he is a good citizen who is willing to spend his time and money for things other than material gain.

I have long enjoyed and cherished my association with the members of the medical profession in Atlanta and in Georgia. Their friendship means a lot to me. Every right-thinking person who is even halfway informed of the problems of the medical profession and of the contributions which the profession has and is making to civilization, and of the sincere efforts of the profession to improve the public health, will agree that free enterprise should be preserved and that state or socialized medicine is not for the public good and that everyone should cooperate with the profession in its campaign for improved health conditions.

I appreciate the honor of being with you tonight.

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## SKIN ERUPTIONS OFTEN DEVELOP FROM DRUG APPLICATIONS

Skin eruptions are often caused by drugs used to correct an existing disorder, according to an article by Lester Hollander, M.D., Pittsburgh, in the current issue of *Hygeia*, the health magazine of the American Medical Association.

"It is common knowledge among skin specialists," Dr. Hollander asserts, "that both externally applied and internally administered drugs can cause a great variety of skin eruptions.

"Since the actual cause of an eruption is increasingly more difficult to identify as its duration lengthens, and since certain eruptions may precipitate chronic organic damage, physicians have to be on the alert for them. However, most of the annoying skin eruptions of this class are not caused by professionally prescribed medication. The source of a blistery eruption of the hands and feet or a diabolic nocturnal itch is more often found in the consumption of proprietary (patent) medicines."

Cold remedies, headache cure-alls and cathartics are among the most common remedies causing skin disorders, the doctor states.

"The kingpin among the many-purposed vitamin B complex groups, thiamine chloride or $B^1$, not infrequently causes a skin eruption. At times the benefits of vitamin B are nullified by the inconvenience, insomnia and nervousness caused by the vitamin itch.

"You can accept it as axiomatic," the article continues, "that any skin disease or eruption which becomes increasingly annoying after the use of a local application is being irritated and not helped by it—even if its 'purity' and 'non-irritating' qualities are certified by movie stars, golf professionals or any such disinterested, self-sacrificing people. Of all these nostrums the so-called athlete's foot remedies are the most noxious."

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## HEALTHGRAMS

Periodic group chest x-rays are of value to industry through the detection of early cases of tuberculosis, whereupon a leave of absence for treatment, followed by assignment to duties with less exacting physical demands can be arranged. Also, the chest survey may give the first indication of progressive heart disease and be the clue leading to the removal of a man from arduous physical work. Rodney R. Beard, M.D., Nat. Tuberc. A. Tr., 1947.

* * *

More effectively than any other approach, medicine and public health can build a conception of common human need, of the single destiny that awaits life on this planet, whether it be good or evil. We are members of one human family, fighting the same enemies of disease and suffering. Only by united effort can we survive, and the field of public health can be a practical demonstration of a new kind of teamwork. It can be a bridge across the gulf that separates this frightened present from a saner and better balanced future. Symbolically and literally it can bring its healing techniques to a human society that is desperately sick. Raymond B. Fosdick, Am. J. Pub. Health, January, 1948.

* * *

The records in the chest diagnostic clinics prove that the physicians of the state, if they are determined to do so, can perform a better job of suspecting and discovering active tuberculosis cases, year in and year out, than any other agency. It is noteworthy that in the past year, as in other years, more cases of active pulmonary tuberculosis were found among the referrals by physicians to the chest diagnostic clinics than in any other groups of people examined. Comm. on Tbc., N. H. Med. Soc., New England J. Med., Oct. 23, 1947.

* * *

Adult types of pulmonary tuberculosis have shown an alarming incidence among children of school age in all of the wartorn countries; tuberculosis of bone and joints has increased many times; miliary tuberculosis and tuberculous meningitis in children are now common. In every children's hospital I visited I saw ward after ward of the victims of tuberculosis. In one small country, not atypical of others, I learned that to take care of the known cases of bone tuberculosis alone among children 7,000 new hospital or sanatorium beds were needed. They had only 500 when I was there. Martha M. Eliot, M.D., Am. Jour. Pub. Health, Jan., 1948.

* * *

First tentative steps toward rehabilitation should be taken as soon as the patient's clinical status permits and the period of hospitalization should be used to the fullest extent for purposeful activities directed toward the final aim of physical, psychic and economic rehabilitation. Max Pinner, M.D., Ed., Am. Rev. Tbc., Aug., 1947.

* * *

The most important of all case-finding agencies . . . in the fight against tuberculosis continues to be the practicing physicians. It is almost always true that the family physician has the first opportunity not only to ascertain the presence of active pulmonary tuberculosis but also to give battle for the cure of the afflicted and the safeguarding of the other members of the family from the tubercle bacillus. It is the family physician to whom most people go when troubled by signs of ill health. Comm. on Tbc., N. H. Med. Soc., N. E. Jour. Med., Oct. 23, 1947.

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OF THE

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MAY, 1948

## ATLANTA SESSION, 1948

The Atlanta session of 1948—what is believed to be the ninety-eighth annual session of the Medical Association of Georgia—was concluded April 30. Since some records of the Association are not available, particularly those prior to 1868, and since the session of 1945 was cancelled by the Office of Defense Transortation of World War II, and since it is a fact the Association was organized in 1849, naturally there is some doubt about the actual number of annual sessions held in the first 99 years of the Association's existence.

Regardless of all these doubts about what happened in the past, the Atlanta session of 1948 measured up to a good medical meeting. Seven hundred fifty-eight physicians registered for attendance at the numerous scientific programs. Two hundred fifty physicians' wives, most of them members of the Woman's Auxiliary to the Medical Association of Georgia, registered, as did 102 exhibitors, a few visitors, and representatives of the press. All told, the registration exceeded 1,100 persons.

The next annual session of the Association will be held in Savannah.

## OFFICERS AND COMMITTEES 1948-49

At the final business meeting of the Association's 1948 annual session, Dr. Edgar H. Greene, of Atlanta, assumed the position of president; Dr. Enoch Callaway, of LaGrange, was elected president-elect; Dr. E. A. Allen, of Atlanta, was chosen first vice-president; Dr. Fred Simonton, of Chickamauga, was designated second vice-president; Dr. J. W. Simmons, of Brunswick, was continued as parliamentarian, and Dr. Edgar Shanks, of Atlanta, began another year as secretary-treasurer of the Association.

Dr. Allen H. Bunce, of Atlanta; Dr. Olin H. Weaver, of Macon, and Dr. B. H. Minchew, of Waycross, were re-elected delegates to the American Medical Association. Named to serve as their alternates were Dr. W. W. Daniel, of Atlanta; Dr. W. R. Dancy, of Savannah, and Dr. C. K. Sharp, of Arlington.

A full list of all officers and committees will be found on pages 195-198 of this JOURNAL.

## AWARDS FOR SCIENTIFIC EXHIBITS

During the recent war scientific exhibits were scarce, for the reason few people had the time to prepare an exhibit. One year, 1944, at the height of the war, no Georgia physician offered an exhibit at the Savannah session of the Medical Association of Georgia. But it is refreshing to note that this part of the Association's activities has come back, and in a big way too. At the Atlanta session just ended were many fine scientific exhibits; indeed all were good, so much so the judges experienced difficulty in arriving at conclusions as to whom awards should be made. Finally, the following persons were awarded certificates of merit:

First award: Drs. Edgar R. Pund and H. E. Nieburgs, Department of Pathology, University of Georgia School of Medicine, Augusta. Exhibit: *The Value of Vaginal and Cervical Spreads for Early Recognition of Carcinoma.*

Second award: Dr. Lester S. Blumenthal, George Washington University School of Medicine, Washington, D. C. Exhibit: *Headache: Diagnosis and Treatment.*

Third award: Drs. J. Elliott Scarborough, Robert L. Brown and Everett L. Bishop, Robert Winship Memorial Clinic, Emory University School of Medicine, Atlanta. Exhibit: *Melanomas.*

Honorable mention: Drs. Homer S. Swanson and Edgar F. Fincher, Atlanta. Exhibit: *Cerebral Arteriography.*

Honorable mention: Dr. Jacob J. Weinstein, George Washington University School of Medicine, Washington, D. C. Exhibit: *Proteins in Surgery.*

Honorable mention: Drs. Daniel C. Elkin and F. W. Cooper, Jr., Department of Surgery, Emory University School of Medicine, Atlanta. Exhibit: *Peripheral Vascular Diseases.*

## CONSTITUTION OF THE ASSOCIATION CHANGED

At the Augusta session of 1947 it was proposed that that part of the Constitution of the Medical Association of Georgia dealing with procedure for the election of officers be changed. While the proposal was not entirely clear in some respects and omitted any procedure for the election of delegates to the American Medical Association. the Parliamentarian ruled that the intent of the proposal was clear and that it could be modified at the Atlanta session of the Association, just closed. The changes, as finally made and adopted, follow:

All of Section 3 of Article 9 of the old Constitution was deleted, the following comprising now the whole of the said Section 3 of Article 9 of said Constitution of the Medical Association of Georgia, as follows:

The officers of this Association shall be elected by ballot. The nomination for office shall be made orally, on the first day of the annual session immediately after the response to the address of welcome and just before the first paper of the scientific program. The nominating speech shall not exceed two minutes.

The Councilors shall be nominated at the same time by their respective district societies, hut if no nomination from a district society is brought before the Association, the nomination for Councilor may be presented from the floor.

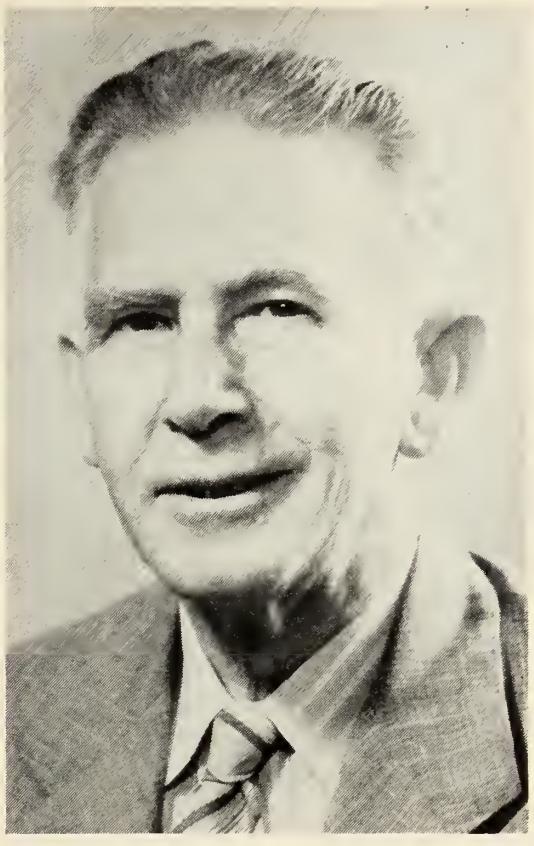
A locked ballot box shall be set up by 12:00 noon of the first day of the annual scientific session, at the registration booth. Official ballots, with a blank space for writing in the name of the candidate for each office, shall be printed and kept in the custody of the Secretary-Treasurer, who shall check the eligibility of each voter before handing him an unnumbered ballot. Votes shall be deposited in the locked ballot box.

Voting shall take place during the hours that the scientific program is in session, from 12:00 noon on the first day of the annual session until 10:30 a.m. of the third day of the annual session. A committee, appointed by the President, shall count the votes in the ballot box at 10:30 a.m. of the last day of the annual session and report their findings to the Association. The candidate receiving the highest number of votes shall be declared elected.

Delegates to the American Medical Association shall be elected at the same time and in the same manner.

## ENOCH CALLAWAY, M. D.

It has long been a custom of the Medical Association of Georgia to elect as its president-elect. and subsequent leader, one of its distinguished members. Comes now to this office Dr. Enoch Callaway of LaGrange, whose election was unanimous at the Atlanta session of 1948. He will assume his duties as president at the centennial meeting of the Association, which will be held in Savannah next year.



ENOCH CALLAWAY, M. D.

The son of the late Dr. Enoch and Fannie (Banks) Callaway of LaGrange, he was born March 22, 1892. Events in his life from that time on have been: attended private grammar school; LaGrange High School; Bingham School, Asheville, N. C., where he graduated and where he held a commission as lieutenant in the school's cadet corps; studied at the University of Georgia for three years, where he was a member of S. A. E. Fraternity; studied medicine at Tulane University, New Orleans, La., where he was a member of A.K.K. Fraternity and where he received his degree of Doctor of Medicine in 1916; completed work for his Bachelor of Science degree at LaGrange College, LaGrange, Ga., which was granted; obtained hospital training at Natchez Hospital, Natchez, Miss., and

Mississippi State Charity Hospital, Jackson, Miss.; served as medical officer in the United States Navy for approximately three years, and was assigned to the North Atlantic Battle Fleet, and again to Special Task Force No. 2; began the practice of medicine in LaGrange, and since 1922 has limited his practice to surgery and radiology; did graduate work at Emory University School of Medicine, and at the Skin and Cancer Hospital, New York, N. Y., and has attended various clinics throughout this country, particularly clinics dealing with surgery, and the diagnosis and treatment of cancer.

In his home city—LaGrange—Dr. Callaway is closely identified with the social, cultural, educational and medical activities of his community. He is medical lecturer at LaGrange College; from 1922 to 1937 he was director of the Relief Association Free Clinic; since 1937 he has been director of the City-County Hospital Cancer Clinic, and is senior attending surgeon of the hospital. He has long been the medical director and consulting surgeon for Callaway Mills. He is a member of the Episcopal Church, in which he is a lay reader. He is a Mason. His hobbies are golf, which had to be curtailed because of the ever-increasing responsibilities in his work; aviation, in which he pilots his own plane; and farming, in which he excels as a raiser of shorthorn cattle.

Dr. Callaway early became a member of organized medicine. He is a past president of the Troup County Medical Society, and the Fourth District Medical Society. For more than twenty years he has been a vice-councilor of the Medical Association of Georgia, from the Fourth District. His regular attendance at the meetings of the Council, and his interest in the affairs of the Association at all times, alone qualify him for the position to which he was elected. But this is not all, nor could the full story about his life and accomplishments be told in this brief biography. Suffice it to add, in 1936 he was one of the organizers of the Field Army of the American Cancer Society for Georgia and is now chairman of the executive committee which directs the activities of this group. In addition to his duties as vice-councilor of the Medical Association of Georgia, he has served on various committees of the Association, principally the Cancer Commission, and has contributed to the scientific programs at the annual sessions of the Association. He is a member of the Georgia Radiological Society, and holds fellowship in the American Medical Association, the Southeastern Surgical Congress and the American College of Surgeons.

Finally, Dr. Callaway has a fine family. In 1923 he was married to Miss Jennie Crowell of Columbus, Ga. They have two children: Miss Sallie Callaway, a student in LaGrange High School, LaGrange; and Dr. Enoch Callaway, III, now serving an internship in Henry Grady Memorial Hospital, Atlanta. The Callaways represent three generations of physicians, all of whom have made contributions to Georgia medicine, and it is certain such contributions will continue to the benefit of the public, including the members of this Association.

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## LARGE ATTENDANCE EXPECTED AT JUNE SESSION OF A. M. A.

A possible total registration of 30,000 persons at the annual American Medical Association convention to be held in Chicago, June 21-25, is anticipated by Thomas R. Gardiner, business manager of the Association.

More than 6,000 hotel rooms will be required to handle the out-of-town physicians expected to attend the session. These doctors, plus the large number living in the Chicago area, are expected to bring the total number of medical men registering at the session to 12,000. Wives, guests, exhibitors and others will probably bring the complete total of persons attending to about 30,000.

At the last Chicago annual session of the Association, held in 1944, the total registration of physicians reached 7,284. The Atlantic City

centennial celebration of the American Medical Association last year brought a total of 15,667 physicians.

Technical exhibits, which present the latest in modern medical and surgical supplies, will occupy at least 50,000 square feet of space on Navy Pier. At the Atlantic City centennial session last year, such exhibits occupied a total net area of 45,500 square feet.

## JOURNAL ARTICLE WEIGHS NUTRITIVE VALUES OF CEREALS, VEGETABLES

Oatmeal and rolled oats, once considered by some to be fit only for animals, now outrank all other breakfast food cereals in nutritional value, according to a report on foods of plant origin by Leonard A. Maynard, Ph.D., and Walter L. Nelson, Ph.D. of Ithaca, N. Y.

Writing in the April 17 issue of *The Journal of the American Medical Association*, Drs. Maynard and Nelson give as the reason for oatmeal's high place on the nutritive scale the fact that in the milling of the cereal, "only the fibrous hull and the adhering postions are removed," leaving the germ and other vitamin—and mineral-rich parts for use as human food.

In addition to its other virtues, the article states that oatmeal and rolled oats also rank above wheat products both in fuel value and in protein content. Oat products are also rich sources of iron, and, when properly cooked, are highly digestible. Approximately 529 million pounds, more than any other breakfast food cereal, are consumed yearly by the American people.

Discussing the overall picture of plant food consumption in the United States, the authors say that over 50 per cent of our diet consists of foods of plant origin. In addition, the article states, "plant products make a contribution to the human diet through their influence on the nutritive value of animal products."

Cereals, used in the authors' study to include "the cereal grains and their products, including flour, bread, breakfast foods, crackers, cookies, pastry and macaroni," provide a third or more of the protein of the American diet and, according to an editorial quoted from The Journal of the A.M.A., "are the backbone of the nutrition of most of the races of the earth."

"Wheat," the article states, "is by far the leading cereal in the diet in the United States, furnishing approximately 25 per cent of the total calories consumed."

The new and enriched flour, now used in the making of the majority of bread consumed in this country, is said by the authors to be of "outstanding superiority" to ordinary white flour. This, according to their report, is because the enriched flour contains six times as much thiamine, also known as vitamin $B_1$.

Canned corn, the report states, is "equal to corn meal in energy and protein on an equivalent moisture basis, and is superior to the milled product in mineral and thiamine content."

Enrichment standards for corn meal and grits have been set up by the Food and Drug Administration in line with the flour enrichment program. These standards are designed to maintain certain thiamine, riboflavin, nicotinic acid and iron requirements for corn meal and grits.

Dry legumes, such as beans, peas and lentils, are, according to the article, twice as rich in protein as are the cereals. Dried navy and kidney beans, green or dried lima beans, lentils and cow peas are also rich sources of vitamin $B_1$. Drs. Maynard and Nelson state, adding that two thirds of a cup of baked beans per day will supply one half of the daily adult iron allowance.

Among the vegetables, the report states that potatoes make up one of the largest parts of the American diet. According to the report, "potatoes are primarily an energy food, consisting largely of starch." They are a significant source of iron and also provide a substantial amount of ascorbic acid, or vitamin C.

Leafy vegetables, such as cabbage, kale, broccoli, lettuce, spinach, etc., are, according to the report, "outstanding sources of certain minerals and vitamins."

## DOCTORS REPORT SPEEDY TEST FOR SICKLE-CELL ANEMIA

A rapid test to demonstrate the sickling process in blood, whereby the red corpuscles acquire a sickled, or crescent-like shape, is reported by Karl Singer, M.D. and Sidney Robin, M.D., in the April 17 issue of *The Journal of the American Medical Association*.

The two doctors are from the Department of Hematologic Research and the Kunstadter Laboratory for Pediatric Research, Michael Reese Hospital, Chicago.

Sickle cell anemia, which results from the sickling phenomenon, is, in the words of the authors, "a great masquerader," manifesting itself in several different ways. Often, according to the article, sickle cell anemia may be confused with perforated ulcers, rheumatic fever, tuberculosis, or skin and nerve diseases. The disease is confined principally to Negroes and the tendency to it is hereditary.

Because of these diagnostic pitfalls, the authors state that "the need for routine examinations for the sickling phenomenon has been emphasized repeatedly," adding that "particularly in the dramatic surgical conditions a rapid test is urgently needed."

The present methods of examining the sickling process are inadequate, according to the authors, because "they do not provide the required information with sufficient rapidity and reliability."

In the rapid test devised by Drs. Robin and Singer, a drop of the suspected blood is mixed

with a drop of cloudy broth culture of non-disease-breeding bacteria and then sealed. Thus, according to the article, "the living organisms consume oxygen rapidly and also give off carbon dioxide. . . . creating the most favorable conditions for the detection of sickling tendencies."

"The mechanism on which the test is based," the authors state, "is the rapid reduction of the hemoglobin contained in the corpuscles, which is a necessary requirement for the sickling phenomenon."

## HYGEIA EDITOR URGES CONTINUED FIGHT AGAINST DISEASES

"Medicine needs the support of understanding people who participate with their gifts and with their hours of work," states Dr. Morris Fishbein, editor of *Hygeia*, the health magazine of the American Medical Association. Writing in the current issue of the magazine, Dr. Fishbein states in full:

"Once upon a time the battle against tuberculosis, cancer, heart disease and the crippling diseases was exclusively a doctor's fight. Once upon a time the words 'cancer' and 'syphilis' were not mentioned in public gatherings because of the fear or disgust they might arouse in the minds of men and women.

"Then came the realization that a single group of the population could not win the fight alone. Now we have evolved in the United States a system of attack peculiar to the American way of life. Medicine and the public and leaders in public health and educators and philanthropists join together in a common cause against the foes that threaten the lives of human beings.

"Fifty years ago Osler called tuberculosis the captain of the men of death. Weapons in our battle against tuberculosis were the discovery of the causative organism of tuberculosis; the discovery of the way by which tuberculosis is spread; the discovery of public health methods which would isolate the patient who spreads tuberculosis and keep him from the contact with those easily susceptible to the disease; the development of a new chemotherapeutic technic for attacking tuberculosis in the human body; the experimentation with BCG as a means of inoculating people against the disease.

"Today tuberculosis is seventh in the list of causes of death in the United States. The scientific progress has been carried over to the people through the medical profession, public health agencies, sanatoriums and hospitals. The funds have come from the people, from governmental agencies, from the sale of Christmas seals and the efforts of the National Tuberculosis Association.

"In the United States we have made tremendous advances against infant mortality by studying the diseases of infancy, by control of milk and water and the food supply, by proper study of nursing care of babies, by the care of premature infants.

"Our infant mortality rate has moved far down in the list of causes of death. There has been and there is being more and more suitably coordinated and well integrated action by the professions concerned, governmental agencies and voluntary associations.

"The medical profession and public health officials recognize today the need for public support in the great battles that lie ahead against heart disease, cancer, accidents, degenerative diseases of blood vessels and kidneys, crippling diseases and conditions involving the nervous system.

"The pattern established by the National Foundation for Infantile Paralysis and now followed by the American Heart Association, the American Cancer Society, the National Society for Crippled Children and Adults, and by new organizations against diabetes, epilepsy and multiple sclerosis is effective.

"Medicine needs the support of understanding people who participate within their gifts and with their hours of work, because they have been inspired by ideals of humanity to join the voluntary organized mass attack against disease."

## CALIFORNIA DOCTOR REPORTS IMPROVED VACCINE FOR UNDULANT FEVER

Improved vaccine in the treatment of undulant fever, or brucellosis, is proposed by Dr. Joseph Griggs, of Claremont, Calif., in the April 3 issue of *The Journal of the American Medical Association*.

Treating 300 patients for a 10-year period in California, Dr. Griggs reports that the usual methods of vaccine therapy were disappointing but a new way of using vaccine resulted in improvement of 85 to 90 per cent of all cases.

When he first began his research, Dr. Griggs used commercial vaccines administered in doses recommended in the folders which accompanied the products.

The objective of such treatment was a kind of shock therapy, designed "to give the patient a fairly severe local and general reaction."

"Sometimes", Dr. Griggs states, "the results were gratifying and successful. More often, the results were short lived or quite inconclusive."

From this early experience, Dr. Griggs concluded that the use of the commercial, heat-killed vaccines in the treatment of undulant fever was inadvisable because, of the many patients who did benefit from the therapy, many relapsed later and most objected to the discomfort and disability of the condition.

The next logical step, according to Dr. Griggs, was to decrease the size of doses of vaccine in the hope of avoiding excessive reactions.

In addition, the serum was diluted with a salt solution and the intervals between injections were adjusted to the patient's needs.

This method, Dr. Griggs discovered, brought about the most gratifying results yet attained in undulant fever treatment.

In addition to the high rate of cure and improvement, this latest therapy is applicable to nearly all cases of the fever and "is usually accompanied by symptomatic improvements, rather than unpleasant reactions."

However, the physician points out, a long time is required to complete the treatment, old people and those particularly sensitive to vaccine are particularly difficult to treat, and great care is required in both the handling and preparation of the serum.

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## PUBLIC HEALTH AS A CAREER

Guy G. Lunsford, M. D.
Georgia Department of Public Health
*Atlanta*

"A few years ago I had very little regard for public health and public health workers, but today I have great regard and respect for both public health and public health workers." These words were recently spoken by a well-known and respected Georgia physician before a number of doctors attending a luncheon meeting. He did not explain why his opinion had changed, and we can only guess his reasons.

His former appraisal may have been based upon the public health program of a quarter century ago, when the average health department consisted of only a private physician who gave part-time services as health officer. He may have had one or more police officers assigned on a part-time basis, and possibly a nurse or two. None of these had had any special training for the work, and probably little interest in it. They more than likely got and held their jobs because they voted right in the last election. The activities of these part-time health officers were usually evident only when an epidemic occurred, and consisted of strict quarantine regulations and enforcement of legal regulations by police authorities.

As a result of the Rockefeller hookworm campaign about that time, this activity was added to the work of the health department in Georgia. The advent of typhoid vaccine and diphtheria toxin-antitoxin added the immunization program for protection against these diseases to that for protection against smallpox.

Until about a third of a century ago, all public health work was confined to the cities. A county-wide epidemic of typhoid fever in the State of Washington resulted in the first county-wide health department. Three years later, in 1914, due to the love of humanity and foresight of Dr. T. F. Abercrombie and Mr. R. C. Ellis, member of the Georgia Legislature from Tift County, a law was passed that ushered in a new era for public health in the nation. Georgia was the first state to enact these legal provisions and some of the states just now are preparing to pass similar laws.

A board of health was created for each county in Georgia, with specific authority and responsibility for all matters pertaining to health and sanitation in the county. A physician was a member of each board of health. Provision was also made for health districts comprising two or more counties. These county and district boards of health were authorized to organize and maintain full-time public health departments.

Although we may be proud of this leadership of Georgia, there is another point of leadership of which we may be much prouder. Other provisions of this same law served to raise the standard of public health work and of public health workers. Other states and the Federal agencies have or will follow Georgia's example in these provisions. First, this law designated that the position of commissioner of health be full-time and that he must not engage in private practice or actively in any other work. Second, it required that he be specially qualified for this work in that he was required to pass a special examination showing his fitness for the work. Georgia was not only the first but the only state to make this a legal requirement for the position of health officer until recent years when civil service or merit system laws were enacted to meet Federal regulations to qualify for funds from the National Government.

It should also be remembered that there is no other specialty in medicine for which there is a *legal* requirement that a special examination be taken before a doctor can practice his specialty.

More than a dozen of the leading universities have, in recent years, added courses leading to degrees in public health.

Movement is under way to create a public health specialty board similar to that existing for many of the other specialties.

The adoption of standards, the legal adoption of a merit system that assures permanency of position, and the removal of public health from political domination have had the effect of not only raising the quality of personnel, but have added dignity to the work. Most of the states have retirement or pension systems which provide for employees who retire due to age or disability. It is anticipated that the next session of the General Assembly of Georgia will also pass such a law.

The duties of a public health physician are varied and interesting. The county or local health officer, the "general practitioner" of public health, serves as the administrator of his department as well as rendering certain direct services. He selects the other members of his staff and directs their activities. Through surveys and other means he determines the important public health problems of his district, and institutes methods and programs for their solution. Should an epidemic occur, he takes the proper steps to prevent its spread by finding its source and eliminating it, by instituting correction of insanitary conditions, by immunizations, and so on. An informed community is essential to a successful public health program, so he directs and conducts a program of public

health education. In short, the health officer develops and carries out programs and policies that will promote, protect, and improve the health of the individuals of the community which he serves.

The salaries now being paid public health physicians are not as much as we would like them to be, but when the fact that there is no "overhead" expense considered, these appear better. The beginning salary for a health officer with some training is $5,640, and, after experience, this may go as high as $8,100, with liberal travel allowances. It is estimated that the "overhead" expense of private practice runs from 50 to 70 per cent of the gross income, so that public health salaries are the equivalent to a practice of from $11,280 to $16,200, or higher.

So far we have discussed the position of the health officer or "general practitioner" of public health, but there is also need for public health specialists, with training in maternal and child health, tuberculosis control, venereal disease control, epidemiology, and industrial hygiene.

The demand for trained public health physicians has been steadily increasing for several years and will continue for years to come. Forty additional physicians are needed in Georgia today. The expense for the special training required, with a liberal stipend during the training period, is being offered by the Georgia State Board of Health. Any physician who is interested in a non-political position in which he can render service to a large and appreciative group of people, with a known net income, with fairly regular hours of work, with vacation and sick leave assured, and in which the work is varied and interesting enough to challenge his professional knowledge and abilities, should consider and investigate public health as a career.

## HYGEIA ARTICLE URGES HEALTH PRECAUTIONS FOR TRAVELLERS

Prospective travellers to Europe and other foreign countries are urged by a New York state doctor to fortify their health before leaving American shores.

Writing in the current issue of *Hygeia*, the health magazine of the American Medical Association, Dr. James A. Brussel, who is assistant director of Willard State Hospital, Willard, N. Y., says that "the most seasoned globe-trotter is carefully fortifying himself with such foreign post-war scarcities as film, soap and tissue, but not one in a thousand travellers is giving a thought to his personal physical well-being."

Dr. Brussel warns that in Europe, first-class doctors and even the commoner medicines may not always be available when needed. Even among the hospitals that went unscathed by bombs, the writer says, there is still inadequate plumbing, heating, water, linen, drugs, nurses and doctors.

In some European cities, Dr. Brussel points out, sewage systems are especially bad, rendering the water unpleasant and dangerous to drink. He suggests that the traveller avoid as much as possible the consumption of any water, substituting tea, coffee, wine or bottled American soft drinks instead.

Touching on precautions which he advises taking before departing on a long ocean voyage, Dr. Brussel suggests first of all a physical check-up by the family physician.

A small first aid kit, the doctor adds, may prove to be one of the most cherished of the personal possessions of the overseas traveller.

Typhoid and paratyphoid immunization is especially recommended. Three injections, spaced a week apart, may produce some discomfort, Dr. Brussel says, but "this minor sacrifice is worth a million-fold compared to what may occur to the uninoculated."

The article states that typhoid and paratyphoid shots should be given at least three months before sailing for it takes the blood system at least that time to develop immunity in response to the injections.

Visitors to the Mediterranean countries, Dr. Brussel states, would be wise to be inoculated against cholera and typhus fever. Both injections are painless when given and cause no after-effects. Tetanus and smallpox immunization, via injection and vaccination, are also recommended.

Eating in foreign restaurants can be either a pleasure or a danger, according to the article. Among the simple precautions recommended to reduce hazards which might thus be incurred is the avoidance of eating uncooked food, much of which carries disease-breeding germs.

Although it is considered by some to be "crude," Dr. Brussel suggests that wiping off silverware with a clean napkin might pay off in better health and a happier journey.

As a final precaution against the diseases which often ravage Europe, Dr. Brussel suggests the use of DDT. A small bomb of DDT is small, light, easy to use and promptly effective. One bomb lasts several months and the odorless spray which it produces neither discolors, stains nor harms clothing.

## COUNTIES REPORTING FOR 1948

***Appling County Medical Society***

Secretary-Treasurer—J. T. Holt, Baxley
Delegate—A. S. Carswell, Baxley
Alternate Delegate—H. C. McCracken, Baxley.

***Georgia Medical Society***
(Chatham County)

President—M. J. Epting, Savannah
Vice-President—Lawrence B. Dunn, Savannah
Secretary-Treasurer—Stephen J. Lange, Savannah
Delegates—G. L. Touchton and John L. Elliott, Savannah
Alternate Delegates—H. H. McGee and Ruskin King, Savannah.
Censors—W. V. Long, J. C. Metts and G. L. Touchton, Savannah

***Chattooga County Medical Society***

President—G. H. Little, Trion
Vice-President—Wm. T. Gist, Summerville
Secretary-Treasurer—W. B. Hair, Summerville
Delegate—Wm. U. Hyden, Trion
Alternate Delegate—R. N. Little, Summerville

***DeKalb County Medical Society***

President—T. E. McGeachy, Decatur
Vice-President—C. E. Cunningham, Decatur
Secretary-Treasurer—Lawrence P. Matthews, Atlanta
Delegate—Homer H. Allen, Decatur
Alternate Delegate—C. E. Cunningham, Decatur.

***Newton County Medical Society***

President—J. B. Mitchell, Jr., Porterdale
Secretary-Treasurer—W. D. Travis, Covington
Delegate—F. C. Nesbit, Covington
Alternate Delegate—C. B. Palmer, Covington

***Toombs County Medical Society***

President—H. D. Youmans, Lyons
Secretary-Treasurer—W. W. Aiken, Lyons
Delegate—J. E. Mercer, Vidalia

***Tri-County Medical Society***
Liberty-Long-McIntosh Counties

Secretary-Treasurer—O. D. Middleton, Ludowici

# Officers and Committees of the Medical Association of Georgia 1948-1949

## MEDICAL ASSOCIATION OF GEORGIA

*Officers and Committees 1948-1949*

### *Officers*

President ..... Edgar H. Greene, Atlanta
President-elect ..... Enoch Callaway, LaGrange
First Vice-President ..... Eustace A. Allen, Atlanta
Second Vice-President ..... F. H. Simonton, Chickamauga
Parliamentarian ..... Jno. W. Simmons, Brunswick
Secretary-Treasurer ..... Edgar D. Shanks, Atlanta

### *Delegates to A.M.A.*

B. H. Minchew (1948-1950) ..... Waycross
Alternate, Wm. R. Dancy ..... Savannah
Allen H. Bunce (1948-1950) ..... Atlanta
Alternate, Walter W. Daniel ..... Atlanta
Olin H. Weaver (1948-1950) ..... Macon
Alternate, C. K. Sharp ..... Arlington

### *Council*

W. F. Reavis, Chairman ..... Waycross
Marion C. Pruitt, Clerk ..... Atlanta

### *Councilors*

1. Lee Howard (1949) ..... Savannah
2. C. K. Wall (1949) ..... Thomasville
3. W. G. Elliott (1949) ..... Cuthbert
4. Kenneth S. Hunt (1949) ..... Griffin
5. Marion C. Pruitt (1949) ..... Atlanta
6. H. D. Allen, Jr. (1949) ..... Milledgeville
7. W. H. Perkinson (1949) ..... Marietta
8. W. F. Reavis (1949) ..... Waycross
9. C. B. Lord (1949) ..... Jefferson
10. Harry L. Cheves (1949) ..... Union Point

### *Vice-Councilors*

1. Chas. T. Brown (1949) ..... Guyton
2. C. H. Watt (1949) ..... Thomasville
3. Guy J. Dillard (1949) ..... Columbus
4. J. W. Chambers (1949) ..... LaGrange
5. Spencer A. Kirkland (1949) ..... Atlanta
6. H. G. Weaver (1949) ..... Macon
7. D. Lloyd Wood (1949) ..... Dalton
8. Alton M. Johnson (1949) ..... Valdosta
9. D. H. Garrison (1949) ..... Clarkesville
10. J. Victor Roule (1949) ..... Augusta

### *Executive Committee*

Edgar H. Greene, President ..... Atlanta
W. F. Reavis, Chairman, Council ..... Waycross
Edgar D. Shanks, Secretary-Treasurer ..... Atlanta

### *Honorary Advisory Board*

W. S. Goldsmith ..... President, 1915-1916
Eugene E. Murphey ..... President, 1917-1918
J. W. Palmer ..... President, 1918-1919
J. W. Daniel ..... President, 1923-1924
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C. K. Sharp ..... President, 1928-1929
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J. C. Brim ..... Pelham
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Q. A. Mulkey ..... Millen
Gordon Chason ..... Bainbridge
J. T. McCall ..... Rome
Jeff Richardson ..... Atlanta
T. H. Clark ..... Douglas
E. F. Thompson ..... Valdosta
D. Henry Poer ..... Atlanta
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### *Abner Wellborn Calhoun Lectureship*

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Frank K. Boland ..... Atlanta
Guy O. Whelchel ..... Athens
J. Calhoun McDougall ..... Atlanta

### *Medical Economics*

Major Fowler, Chairman ..... Atlanta
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J. C. Keaton ..... Albany
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Marcus Mashburn ..... Cumming
G. Lombard Kelly ..... Augusta
Ruskin King ..... Savannah
Steve P. Kenyon ..... Dawson
Walter W. Daniel ..... Atlanta
Russell Thomas ..... Americus
Hugh G. Mosley ..... Atlanta
Geo. W. Fuller ..... Atlanta
Jas. N. Brawner, Jr. ..... Atlanta

### *Memorial Exercises*

M. Preston Agee, Chairman ..... Augusta
Ruskin King ..... Savannah
J. C. Patterson ..... Cuthbert
George H. Lang ..... Savannah
Frank K. Boland ..... Atlanta
A. M. Phillips ..... Macon
M. T. Edgerton ..... Atlanta
Marion McH. Hull ..... Atlanta

### *Medical History of Georgia*

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J. Calvin Weaver ..... Atlanta
Olin H. Weaver ..... Macon
Eugene E. Murphey ..... Augusta
William R. Dancy ..... Savannah
J. L. Campbell ..... Atlanta
McClaren Johnson ..... Atlanta

*Orthopedics*

Fred G. Hodgson, Chairman ..... Atlanta
Thomas P. Goodwyn ..... Atlanta
F. Bert Brown ..... Savannah
J. Hiram Kite ..... Atlanta
L. H. Muse ..... Atlanta
Peter B. Wright ..... Augusta
W. A. Newman ..... Macon
H. Walker Jernigan ..... Atlanta
Ed Irwin ..... Warm Springs
W. L. Funkhouser ..... Atlanta
Lawson Thornton ..... Atlanta

*Ophthalmology*

Zach W. Jackson, Chairman ..... Atlanta
E. N. Maner ..... Savannah
W. P. Rhyne ..... Albany
H. M. Moore ..... Thomasville
Herschel C. Crawford ..... Atlanta
C. L. Pennington ..... Macon
S. J. Lewis ..... Augusta
Mason Baird ..... Atlanta
F. P. Calhoun, Jr. ..... Atlanta
Lewis Patton ..... Athens

*Syphilis*

Harold P. McDonald, Chairman ..... Atlanta
J. T. McCall ..... Rome
Willis P. Jordan ..... Columbus
Wallace Bazemore ..... Macon
W. L. Dobes ..... Atlanta
J. Z. McDaniel ..... Albany
Harry Righton ..... Savannah
R. F. Wheat ..... Bainbridge
L. W. Pierce ..... Waycross
Hartwell Joiner ..... Gainesville
Reese Coleman ..... Atlanta
Robert Greenblatt ..... Augusta
Joseph Yampolsky ..... Atlanta

*Industrial Health*

J. Harry Rogers, Chairman ..... Atlanta
Thomas P. Goodwyn ..... Atlanta
W. W. Chrisman ..... Macon
L. M. Petrie ..... Atlanta
W. W. Battey ..... Augusta
Chas. E. Lawrence ..... Atlanta
W. A. Newman ..... Macon
C. F. Holton ..... Savannah
John P. Garner ..... Atlanta
W. P. Harbin, Jr. ..... Rome
Rufus Askew ..... Atlanta
Harry Talmadge ..... Athens

*Clinical Pathology*

Edgar R. Pund, Chairman ..... Augusta
G. Darrell Ayer, Jr. ..... Atlanta
A. J. Ayers ..... Atlanta
Thomas Harrold ..... Macon
Lee Howard ..... Savannah
J. M. Feder ..... Albany
Thomas J. Ferrell ..... Waycross
Jack C. Norris ..... Atlanta
Max Mass ..... Macon
E. B. Saye ..... Thomasville
Charles L. Blumstein ..... Columbus
D. F. Mullins, Jr. ..... Athens

*Student Loan Fund*

Mrs. Long King, Chairman ..... Macon
G. Lombard Kelly ..... Augusta
Richard Hugh Wood ..... Atlanta

*Scientific Exhibits*

Robert B. Greenblatt, Chairman ..... Augusta
J. E. Scarborough ..... Emory University
Marion T. Benson, Jr. ..... Atlanta
Lee Howard ..... Savannah
Helen W. Bellhouse ..... Thomasville
J. K. Quattlebaum ..... Savannah
J. Hiram Kite ..... Atlanta
Don F. Cathcart ..... Atlanta
Clair Henderson ..... Savannah
Estelle P. Boynton ..... Atlanta

*Medical Preparedness*

W. A. Selman, Chairman ..... Atlanta
John B. Fitts ..... Atlanta
Edgar D. Shanks ..... Atlanta

*Post-Graduate Study*

G. Lombard Kelly, Chairman ..... Augusta
Richard Hugh Wood ..... Atlanta
R. H. Oppenheimer ..... Atlanta
Thomas Ross ..... Macon
Hollis Hand ..... LaGrange
Richard Torpin ..... Augusta
Cleveland Thompson ..... Millen
Patrick M. Howard ..... College Park
Robert Martin, III ..... Cuthbert
W. F. Reavis ..... Waycross
Vernon E. Powell ..... Atlanta
John Sharpley ..... Savannah
McClaren Johnson ..... Atlanta

*Liaison Committee*
*Georgia State Medical Association*
*(Negro)*

M. T. Harrison, Chairman ..... Atlanta
W. E. Storey ..... Columbus
Lee H. Battle, Jr. ..... Rome
J. F. Hanson ..... Macon
H. H. Allen ..... Decatur

*Pediatrics*

W. W. Anderson, Chairman ..... Atlanta
Philip Mulherin ..... Augusta
Frank Schley ..... Columbus
Hall Farmer ..... Macon
M. M. McCord ..... Rome
Howard J. Morrison ..... Savannah
R. W. Fowler ..... Marietta
A. M. Johnson ..... Valdosta

*Appendicitis*

J. C. Patterson, Chairman ..... Cuthbert
J. K. Quattlebaum ..... Savannah
C. K. Wall ..... Thomasville
F. F. Rudder ..... Atlanta
Ben H. Clifton ..... Atlanta
B. L. Harbin ..... Rome
W. P. Nicolson, Jr. ..... Atlanta
Kenneth McCullough ..... Waycross
R. L. Rogers ..... Gainesville
Julius Pierotti ..... Atlanta
Stewart D. Brown ..... Royston
W. M. Feild ..... Albany
John W. Turner ..... Atlanta

*Awards*

William R. Dancy, Chairman ..... Savannah
T. Schley Gatewood ..... Americus
M. M. McCord ..... Rome
T. C. Williams ..... Valdosta
Henry M. Moore ..... Thomasville
J. Dean Paschal ..... Dawson
W. J. Cranston ..... Augusta
Francis Martin ..... Shellman
T. Luther Byrd ..... Atlanta

*Cancer Commission*

J. L. Campbell, Chairman ..... Atlanta
Jack C. Norris ..... Atlanta
Everett L. Bishop ..... Atlanta
Edgar R. Pund ..... Augusta
Lee Howard ..... Savannah
Cleveland Thompson ..... Millen
J. M. Barnett ..... Albany
R. C. Pendergrass ..... Americus
J. G. McDaniel ..... Atlanta
W. F. Jenkins ..... Columbus
James J. Martin ..... Atlanta

B. T. Beasley ..... Atlanta
Enoch Callaway ..... LaGrange
R. H. McDonald ..... Newnan
James J. Clark ..... Atlanta
J. E. Scarborough ..... Emory University
C. C. Harrold ..... Macon
O. C. Woods ..... Milledgeville
D. Lloyd Wood ..... Dalton
J. T. McCall ..... Rome
D. M. Bradley ..... Waycross
M E. Winchester ..... Brunswick
Hartwell Joiner ..... Gainesville
Charles R. Andrews, Jr. ..... Canton
W. H. Roberts ..... Augusta
S. M. Talmadge ..... Athens
W. J. Murphy ..... Atlanta
Thomas Harrold ..... Macon
Major F. Fowler ..... Atlanta

*Tuberculosis*

C. C. Aven, Chairman ..... Atlanta
C. D. Whelchel ..... Gainesville
R. C. McGahee ..... Augusta
R. V. Martin ..... Savannah
Eustace Allen ..... Atlanta
Warren Gilbert ..... Rome
R. C. Major ..... Augusta
H. C. Schenck ..... Atlanta
W. C. Cook ..... Columbus
E. F. Wahl ..... Thomasville
H. C. Atkinson ..... Macon
Horace E. Crow ..... Rome
A. Worth Hobby ..... Atlanta
J. L. Elliott ..... Savannah
Rufus F. Payne ..... Rome
Mark S. Dougherty ..... Atlanta
Bon M. Durham ..... Americus
Walter Martin ..... Shellman
Malcolm P. Mullen ..... Atlanta

*Advisory Woman's Auxiliary*

Chas. H. Richardson, Chairman ..... Macon
James N. Brawner ..... Atlanta
Sam Anderson ..... Milledgeville
Shelley C. Davis ..... Atlanta
R. C. McGahee ..... Augusta
W. Bruce Schaefer ..... Toccoa
Olin S. Cofer ..... Atlanta
Enoch Callaway ..... LaGrange

*Revision of Pharmacopeia of U. S.*

C. C. Aven, Chairman (1949) ..... Atlanta
Allen H. Bunce (1949) ..... Atlanta
Hal M. Davison (1949) ..... Atlanta

*Maternal Mortality and Infant Deaths*

H. F. Sharpley, Jr., Chairman ..... Savannah
C. B. Upshaw ..... Atlanta
Richard Torpin ..... Augusta
Wm. C. Cook ..... Columbus
G. G. Lunsford ..... Atlanta
John B. Cross ..... Atlanta
David M. Wolfe ..... Albany
O. R. Thompson ..... Macon
W. C. Goodpasture ..... Atlanta
Sam Y. Brown ..... Atlanta
J. B. Kay ..... Byron
Tom Dover ..... Athens
Amey Chappell ..... Atlanta

*Medical Education*

W. E. Person, Chairman ..... Atlanta
J. C. Patterson ..... Cuthbert
H. D. Allen, Jr. ..... Milledgeville
C. K. Wall ..... Thomasville
C. B. Lord ..... Jefferson

*Neuropsychiatry*

W. A. Smith, Chairman ..... Atlanta
Albert F. Brawner ..... Smyrna
Richard B. Wilson ..... Atlanta
Hervey M. Cleckley ..... Augusta
Newdigate M. Owensby ..... Atlanta

## PREPAYMENT MEDICAL CARE PLANS

*State Committee*

B. H. Minchew, General Chairman ..... Waycross
J. L. Elliott, Co-Chairman ..... Savannah
W. S. Dorough ..... Atlanta
Sam Anderson ..... Milledgeville
W. G. Elliott ..... Cuthbert

*First District*

Lee Howard, Chairman ..... Savannah
Charles T. Brown ..... Guyton
A. B. Daniel ..... Statesboro
J. L. Elliott ..... Savannah
R. G. Brown ..... Swainsboro
Katrine Rawls ..... Sylvania
J. W. Palmer ..... Ailey
L. R. Jelks ..... Reidsville
W. W. Aiken ..... Lyons
O. D. Middleton ..... Ludowici

*Second District*

C. K. Wall, Chairman ..... Thomasville
C. H. Watt ..... Thomasville
Harry A. Wasden ..... Quitman
A. G. Funderburk ..... Moultrie
M. A. Ehrlich ..... Bainbridge
I. M. Lucas ..... Albany
J. V. Rogers ..... Cairo
D. P. Belcher ..... Pelham
C. S. Pittman ..... Tifton
J. G. Standifer ..... Blakely
G. S. Sumner ..... Sylvester

*Third District*

W. G. Elliott, Chairman ..... Cuthbert
Guy J. Dillard ..... Columbus
D. B. Ware ..... Fitzgerald
Charles Adams ..... Cordele
M. L. Malloy ..... Vienna
C. P. Savage ..... Montezuma
John Bush ..... Columbus
Albert R. Bush ..... Hawkinsville
J. C. Patterson ..... Cuthbert
T. Schley Gatewood ..... Americus
R. C. Montgomery ..... Butler
J. H. Baxter ..... Ashburn
John L. Gallemore ..... Perry

*Fourth District*

Kenneth S. Hunt, Chairman ..... Griffin
J. W. Chambers ..... LaGrange
R. L. Hammond ..... Jackson
S. F. Scales ..... Carrollton
T. J. Busey ..... Fayetteville
M. F. Cochran ..... Newnan
A. W. Carter, Jr. ..... McDonough
S. B. Traylor ..... Barnesville
R. B. Gilbert ..... Greenville
S. L. Waites ..... Covington
M. M. Head ..... Zebulon
G. L. Walker ..... Griffin
R. L. Carter ..... Thomaston

*Fifth District*

Marion C. Pruitt, Chairman ..... Atlanta
Spencer A. Kirkland ..... Atlanta
Major Fowler ..... Atlanta
L. P. Matthews ..... Atlanta
H. E. Griggs ..... Conyers

*Sixth District*

H. D. Allen, Jr., Chairman ..... Milledgeville
H. G. Weaver ..... Macon
Charles B. Fulghum ..... Milledgeville
C. H. Richardson ..... Macon
J. A. Camp ..... Roberta
C. S. Jernigan ..... Sparta
F. S. Belcher ..... Monticello
John R. Lewis ..... Louisville
Joseph D. Zachary ..... Gray
John A. Bell ..... Dublin
George H. Alexander ..... Forsyth
O. D. Lennard ..... Sandersville
S. N. Rubin ..... Gordon

*Seventh District*

W. H. Perkinson, Chairman ..... Marietta
D. Lloyd Wood ..... Dalton
A. L. Horton ..... Cartersville
W. B. Hair ..... Summerville
L. L. Welch ..... Marietta
C. V. Vansant ..... Douglasville
Lee H. Battle, Jr. ..... Rome
J. E. Billings ..... Calhoun
C. H. Allen ..... Bremen
Cecil B. Elliott ..... Cedartown
Frank L. O'Connor ..... Rossville
H. J. Ault ..... Dalton

*Eighth District*

W. F. Reavis, Chairman ..... Waycross
Alton M. Johnson ..... Valdosta
J. T. Holt ..... Baxley
T. H. Clark ..... Douglas
F. L. Mann ..... McRae
W. L. Pomeroy ..... Waycross
J. Alvin Leaphart ..... Jesup

*Ninth District*

C. B. Lord, Chairman ..... Jefferson
D. H. Garrison ..... Clarkesville
W. T. Randolph ..... Winder
J. S. Jolley ..... Homer
C. D. Whelchel ..... Gainesville
Bruce Schaefer ..... Toccoa
A. A. Rogers ..... Commerce
Marcus Mashburn, Sr. ..... Cumming
Robert T. Jones, III ..... Canton
J. C. Dover ..... Clayton
W. E. Burdine ..... Blue Ridge
L. G. Neal ..... Cleveland

*Tenth District*

Harry L. Cheyes, Chairman ..... Union Point
J. Victor Roule ..... Augusta
John Simpson ..... Athens
A. S. Johnson ..... Elberton
Stewart D. Brown ..... Royston
W. H. Lewis ..... Siloam
A. O. Meredith ..... Hartwell
B. F. Riley, Jr. ..... Thomson
J. H. Nicholson ..... Madison
L. M. Huie ..... Monroe
A. W. Davis ..... Warrenton
T. C. Nash ..... Philomath
W. J. Cranston ..... Augusta

*Fraternal Delegates to Other States*

*Alabama*—J. A. Wood, Macon; Walter D. Martin, Shellman; Reese Coleman, Atlanta.

*Florida*—J. E. Penland, Waycross; C. E. Rushin, Atlanta; J. W. Simmons, Brunswick.

*North Carolina*—W. A. Johnson, Elberton; F. Lee Bivings, Atlanta; C. G. Butler, Gainesville.

*South Carolina*—G. Lombard Kelly, Augusta; D. N. Thompson, Elberton; Jesse L. Meeks, Gainesville.

*Tennessee*—Murl Hagood, Marietta; E. L. Ward, Gainesville; Trammell Starr, Dalton.

STATE BOARD OF HEALTH*

First District: James M. Byne, Jr., Waynesboro, Sept. 1, 1951.
Second District: C. K. Sharp, Arlington, Sept. 1, 1951.
Third District: J. C. Patterson, Cuthbert, Sept. 1, 1948.
Fourth District: J. A. Corry, Barnesville, Sept. 1, 1949.
Fifth District: Robert F. Maddox, Atlanta, Sept. 1, 1948.
Sixth District: C. L. Ridley, Macon, Sept. 1, 1950.
Seventh District: W. P. Harbin, Jr., Rome, Sept. 1, 1950.
Eighth District: B. H. Minchew, Waycross, Sept. 1, 1950.
Ninth District: Robert L. Rogers, Gainesville, Sept. 1, 1951.
Tenth District: D. N. Thompson, Elberton, Sept. 1, 1949.

STATE OF GEORGIA AT LARGE**

*Georgia Dental Association*

W. K. White, Savannah, Sept. 1, 1951.
J. G. Williams, Atlanta, Sept. 1, 1951.

*Georgia Pharmaceutical Association*

George Wright, Tifton, Sept. 1, 1953.
J. B. Butts, Milledgeville, Sept. 1, 1953.

*Nominated by their respective district medical societies and appointed for six year terms.
**Nominated by their respective associations.

STATE BOARD OF MEDICAL EXAMINERS

T. H. Clark ..... Douglas
Muddock Equen ..... Atlanta
Rufus A. Askew ..... Atlanta
Grady N. Coker ..... Canton
Steve P. Kenyon ..... Dawson
Harold P. McDonald ..... Atlanta
L. G. Neal ..... Cleveland
J. W. Palmer ..... Ailey
W. H. Wall ..... Blakely
R. F. Wheat ..... Bainbridge

## TRACE SOME BEHAVIOR DISORDERS TO SLEEPING SICKNESS

A definite relationship between some childhood behavior problems and encephalitis (sleeping sickness) is shown by Drs. J. Victor Greenebaum and Louis A. Lurie in an article in the April 3 issue of *The Journal of the American Medical Association.*

In a study of 78 children who were referred to the Child Guidance Home at Cincinnati, O., Drs. Greenebaum and Lurie conclude that many behavior disorders afflicting the children can be traced to encephalitis, occurring as a complication of other diseases, usually during the first ten years of life.

"From our experience," the physicians state in the article, "we feel that the disease, as a complication of acute infectious and contagious diseases of children, is frequently overlooked."

"One of the reasons," they continue, is that "the neurologic examination often fails to disclose any abnormality. Another reason, and more potent one, is the fact that in the great majority of cases there is no history of an attack of encephalitis."

According to the article, several different, and quite varied, types of behavior disorders may follow encephalitis.

Sometimes there are the simpler disturbances, common to any youngster, such as temper tantrums, running-away or lying.

In other instances, however, the children under observation showed the more violent symptoms of screaming outbursts, irrelevant talk, viciousness, cruelty and hallucinations.

They point out, however, that progress is being made in the efforts to diagnose encephalitis, even without knowing much about its cause or essential nature.

The possibility of encephalitis must be considered, the article states, when "confronted with a child who is extremely hyperactive, restless and destructive, has a short attention span, is highly distractible, lacks self-confidence and whose actions are extremely unpredictable."

The article is the third report of a continuous study of the relation of encephalitis to behavior problems in children.

In some cases, the study covered a 25-year period and involved research and understanding of all the physicial, psychiatric, psychologic and sociologic factors governing a given history.

As to remedies for children whose behavior disorders are associated with encephalitis, the physicians sound a somewhat discouraging note.

Of the 78 children under observation, they state, only 12 have thus far made a fair social adjustment, despite the best medical, psychiatric and social therapy.

This, they conclude, is because the symptoms are primarily the result of changes in the nervous system —changes which, at present, they are unable to correct.

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

### AUXILIARY NEWS

The regular monthly meeting of the Tift County Medical Auxiliary was held recently at the home of Mrs. Charles Zimmerman, with the president, Mrs. R. K. Winston, presiding.

A "Health Day" for Tift County was discussed. Plans were made to invite all civic organizations to attend a meeting on that day when the guest speaker, a well-known representative of the Medical Association of Georgia, will talk on "Prepayment Medical Care in Georgia." Mrs. Winston will speak on the activities of the Medical Auxiliary and the Junior Woman's Club in cooperation with the Tift County Health Department.

Some of the new projects of the Auxiliary are the making of slip covers and draperies for the hospitals, and the visiting of out-of-town patients in the hospitals.

Mrs. Winston made a splendid report on the second meeting of the Tift County Health Council.

Mrs. Charles Zimmerman was elected delegate, and Mrs. Winston alternate to the State Medical Auxiliary Convention which will be held in Atlanta in April.

A donation to the State Medical Student Loan Fund was made, and other business discussed.

After the meeting the hostess served delicious refreshments.

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Dr. Tom Ross showed movies made in the Orient at a recent meeting of the Bibb County Medical Auxiliary, held at the Youth Center.

Hostesses for the meeting were Mrs. O. R. Thompson, Mrs. J. C. Anderson, Mrs. Ben Bashinski and Mrs. William K. Jordan.

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Mrs. Fred Rawlings of Sandersville is the new president of the Woman's Auxiliary to the Sixth District Medical Society, named recently at a meeting at the Massee, which was attended by doctors' wives who assembled in Macon for the session when their husbands attended a district medical meeting. She succeeds Mrs. S. A. Anderson of Milledgeville, who is president-elect of the State Auxiliary.

Other new officers named were Mrs. Shannon Mays, president-elect; Mrs. Charles Cooper, secretary-treasurer; Mrs. William Jordan, parliamentarian, all of Macon.

Speaker for the session was Mrs. John Elliott, Savannah, chairman of legislation for the Woman's Auxiliary to the Medical Association of Georgia. Her subject was socialized medicine.

Mrs. Cooper welcomed the out-of-town members, with Mrs. T. C. Clodfelter of Milledgeville responding.

After the program tea was served by the hostesses, Mrs. William Barton, Mrs. Charles Ridley, Jr., Mrs. Devereaux Jarratt, Mrs. Charles Cooper, Mrs. R. W. Edenfield and Mrs. G. A. Billinghurst.

---

The Chatham County Auxiliary held its regular meeting at the Pink House recently. The president, Mrs. T. A. Peterson, presided. Mrs. W. R. Dancy, *Hygeia* chairman, reported 98 subscriptions or 110 credits, making them eligible for the prize. Mrs. L. W. Williams, chairman of the annual card party, gave an enthusiastic report and told that up-to-date $171 had been received, this being the largest amount ever made.

A nominating committee composed of Mrs. Lee Howard, Mrs. J. K. Train, Jr., Mrs. H. M. Kandel, Mrs. W. R. Dancy and Mrs. R. V. Martin was elected.

The speaker for the meeting was Mrs. W. G. Elliott of Cuthbert, state president. Mrs. Elliott spoke most interestingly and enthusiastically of "The Aims and Objectives of the Woman's Auxiliary."

---

Barrow County Auxiliary held its regular meeting at the home of Mrs. C. B. Almand, with W. T. Randolph, president, presiding. Mrs. Randolph and Mrs. Almand were appointed delegates to the convention held in Atlanta. Mrs. A. B. Russell and Mrs. Ralph Freeman, Sr., of Hoschton were named alternates. Mrs. S. T. Ross and Mrs. Almand reported on Doctors' Day plans—flowers placed in churches, ministers paying fitting tributes to the doctors, flowers placed on doctors' graves and boutonnieres presented to the local doctors.

Mrs. W. T. Randolph and Mrs. Ernest R. Harris recently honored Mrs. Eustace A. Allen, president of the Woman's Auxiliary to the American Medical Association, and Mrs. Olin S. Cofer, president of the Woman's Auxiliary to the Southern Medical Association, both of Atlanta, with a beautifully appointed five-course luncheon at the home of Mrs. H. H. Cobb, Milledge Avenue, Athens.

The guest list included the past presidents, the president, and the president-elect of the Woman's Auxiliary to the Medical Association of Georgia.

Preceding the luncheon, Mrs. Randolph and Mrs. Harris informally entertained Mrs. Allen and Mrs. Cofer at the home of Mrs. Randolph.

The hour was made interesting as well as profitable by the impromptu talks of the distinguished guests. The guests on this occasion were the members of the Barrow County Medical Auxiliary.

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Dr. Hervey Cleckley, head of the neuropsychiatry department, University of Georgia School of Medicine, and well-known author, spoke re-

cently at a luncheon meeting of the Woman's Auxiliary to the Richmond County Medical Society at the Sheraton Bon Air. He was introduced by Mrs. Robert C. Major.

Mrs. W. J. Williams, president, presided at the meeting. She introduced Mrs. June Wilson, director of nurses, University Hospital. Mrs. Wilson spoke on behalf of the great demand for graduate nurses at the hospital.

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Fulton County Auxiliary has been serving dinners to over a hundred doctors at the Academy of Medicine the first and third Thursdays of every month, preceding the regular meetings of the Fulton County Medical Society. This has been of invaluable help to the doctors and has increased the attendance at the meetings. Mrs. J. K. Fancher, chairman of Doctors' Day, planned a "Come as you are party" in compliment to Atlanta doctors. Mrs. D. R. Longino was chairman of the dinner served at the Academy of Medicine. The doctors provided the entertainment, with Dr. Jack Norris as master of ceremonies. Dr. W. A. Selman put on a style show of ladies' hats. Dr. Kells Boland won first prize with a live duck on top of his model, tied on with a veil. Dr. J. K. Fancher treated Dr. Herschel Crawford, his neurotic patient; Dr. B. L. Shackleford, Dr. Marion Pruitt, Dr. Eustace Allen and Don Cathcart "took off" a bridge foursome; Dr. E. L. Graydon performed magic tricks. Dr. Ed Greene and Dr. McClaren Johnson with their accordion music accompanied Dr. John B. Duncan for his "bones act." Dr. Harry Lange, Dr. Paul Vella, Dr. Trawick Stubbs and Dr. Ben Thebaut formed a costumed barbershop quartet; Dr. Jeff L. Richardson furnished music on the Solo-vox during the dinner hour. Dr. Hugh Wood put on a hill-billy act with his banjo, and Dr. William Crowe climaxed the program with a rendition of his original composition, "Water Hyacinth."

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Richmond County Auxiliary held recently a most successful forum on medical care. Dr. David R. Thomas, president of the Richmond County Medical Society, presided as moderator. Dr. Ralph Chaney addressed the audience before the forum began on "Voluntary Prepayment Hospital Care," then conducted a forum on "Voluntary Prepayment or Regimentation." Mr. R. Stuckey, personnel director of the Bath Mills, Inc., had "Industrial Health in the South"; Dr. W. D. Daniel of Clemson College had "The Responsibility of the Educator in Health Problems" and Dr. Clair A. Henderson, Health Commission of Savannah, had "Health Problems in Georgia."

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Bibb County Auxiliary has been doing splendid hospital work. Mrs. Thomas Ross, chairman of welfare, and her committee collected books, games, etc., for patients at Battey Hospital, Rome. She reported a donation of permanent play equipment to the children's ward of the Macon Hospital.

All Auxiliary members and all doctors' wives were cordially invited to attend the convention held in Atlanta April 27-30. Mrs. W. G. Elliott, state president, and Mrs. M. T. Edgerton, president of Fulton County Auxiliary helped make this one of the best seasons in the history of Auxiliary work, and a grand year for Georgia.

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## NEWS ITEMS

Dr. T. C. Davison and Dr. A. H. Letton, of Atlanta, attended the Upson County Medical Society meeting at Thomaston, April 13. Dr. Davison talked on "Abdomens I Have Known", and Dr. Letton showed a movie and gave a talk on "Carcinoma of the Stomach".

* * *

Dr. John L. Barner, of Athens, was guest speaker at the Jefferson Rotary Club, Jefferson, April 6. His subject was "Cancer and its Control".

* * *

Announcing The Berry Clinic for the integrated practice of medicine and surgery at 1010 West Peachtree Street, N. W., Atlanta. Staff: Dr. Maxwell R. Berry, medicine, internal medicine and gastroenterology; Dr. Paul D. Vella, internal medicine, metabolic and endocrine diseases; Dr. Charles P. Marvin, surgery, general and plastic surgery, and Dr. Edward L. Askren, Jr., ophthalmology.

* * *

The Bibb County Medical Society held its dinner meeting at the Sessions Restaurant, Macon, May 4. Program: "Chemotherapy in Cancer", Dr. Kredel, Medical College of the State of South Carolina, Charleston, S. C. Dr. A. M. Phillips, secretary-treasurer.

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Dr. H. William Bondurant, Atlanta, announces the opening of his office for the practice of orthopedic surgery, suite 322, 478 Peachtree Street, N. E., Atlanta.

* * *

Dr. Frank K. Boland, Atlanta surgeon, has just finished writing a new book, "First Anesthesia, The Story of Crawford Long". This book, which will be published soon, is the second biography of Dr. Long ever published. It was in Jefferson on March 30, 1842, that Dr. Crawford W. Long administered ether to young James Venahle before removing a tumor from the patient's neck. Dr. Boland discusses all facts that have been printed about Dr. Long, as well as new evidence which he uncovered after months of research.

* * *

Dr. Randall G. Brown, of Swainsboro, a graduate of Emory University School of Medicine, class of 1932, and a practicing physician in Emanuel County, was made a fellow of the Southeastern Surgical Congress at its recent meeting in Hollywood, Fla.

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Dr. Edgar H. Greene, Atlanta, president of the Medical Association of Georgia, was guest speaker at the nineteenth annual meeting of the Georgia Public Health Association held in Savannah recently. Dr. Greene discussed "Some of Georgia's Medical Problems." Dr. Thomas F. Sellers, Atlanta, director of the Georgia Department of Public Health, spoke on "Some New Perspectives in Public Health."

* * *

The Cancer Control Division of the Georgia Department of Public Health, the Medical Association of Georgia and the Georgia Division of the American Cancer Society recently sponsored a symposium on cancer, which was held at Athens. All physicians in the following counties were invited to attend the meeting: Banks, Berrien, Clarke, Elbert, Franklin,

Greene, Habersham, Hall, Hart, Jackson, Madison, Morgan, Oconee, Oglethorpe, Rabun, Stephens, Walton and Wilkes. Four of the most common forms of cancer were discussed in papers read by Dr. G. T. Bernard, Augusta; Dr. J. D. Martin, Atlanta; Dr. J. H. Sherman, Augusta, and Dr. Robert L. Brown, Atlanta. Dr. John Barner, director of the Athens Tumor Clinic, presided at the session.

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Dr. Bowdre Carswell, Hiawassee, who graduated from the University of Georgia School of Medicine, Augusta, announces the opening of his office in the court house, Hiawassee, for the practice of medicine.

* * *

Dr. Ben Hill Clifton, Atlanta, was elected vice-president of the Atlantic Coast Line Railway Surgeons Association at their meeting held recently in Clearwater, Fla.

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Dr. Joe M. Echols, Nicholls, announces the opening of his office in Nicholls for the practice of medicine.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, May 6. The Committee on Public Relations presented Dr. W. W. Bauer, Chicago, director of the Bureau of Health Education, American Medical Association, as guest speaker. Also another subject, "Bringing Medical Care to the People", by Dr. R. Hugh Wood, Atlanta.

May 7, Dr. Bauer delivered a public address at the Academy of Medicine, Atlanta, on "The Nation's Health is Good."

* * *

Dr. G. L. Garrard, Rome physician, was honored recently by the Floyd County Medical Society in recognition of his 32 years outstanding work in urologic surgery and for his contribution to civic interests in Rome. The occasion was a dinner party, with Dr. A. F. Routledge presiding. A handsome watch and chain were presented Dr. Garrard and toasts were given by approximately ten physicians in his behalf. Dr. Routledge, in his tribute, said: "I know it to be true that he has helped more young doctors to meet their early professional struggles than any other man in Floyd County, not by his knowledge of medicine alone but in a great many cases in a financial way." Dr. Garrard is a member of the Floyd County Medical Society, of the Second Avenue Methodist Church, and of the Chamber of Commerce.

* * *

Dr. J. T. Hogan, of Macon, who recently completed his internship, is now practicing medicine with Dr. Wallace Gibson, Sparta. He expects to practice for three months before entering the Medical Corps of the U. S. Army, where he will serve for several years.

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Dr. Osler A. Abbott, Atlanta, recently attended the annual session of the Medical Association of the State of Alahama held in Mobile. He presented a paper on "Diagnosis and Treatment of Mediastinal Masses."

* * *

Dr. J. E. L. Johnson, beloved Roberta physician, celebrated his 80th birthday at his home in Roberta, April 7. Dr. Johnson has practiced medicine in Roberta for approximately 50 years. Congratulations Dr. Johnson!

* * *

Dr. Frank K. Justice, formerly of Franklin, N. C., announces the opening of his office in Clayton for the practice of medicine.

* * *

Dr. Gordon M. Kelly, Augusta, has returned from Durham, N. C., and Chapel Hill, N. C., where he attended postgraduate courses in thoracic surgery at Duke University and the University of North Carolina. The courses were sponsored by the American Trudeau Society, which is the medical section of the National Tuberculosis Association. The Augusta-Richmond Tuberculosis Society cooperates in this work and provided the scholarship for Dr. Kelly for these courses.

* * *

Dr. Moses S. Levy, Augusta, a veteran of both world wars, in which he served with distinction, has resumed the practice of internal medicine. His offices are at 805-6 Marion Building, Augusta.

* * *

Dr. Calvin Meeks, Jr., formerly of Nicholls, a native of Coffee County and graduate of the University of Georgia School of Medicine, Augusta, announces his association with Drs. Dan Jardine, Sage Harper and R. L. Johnson, Doctors Building, Douglas, for the practice of medicine.

* * *

Dr. J. R. S. Mays, Macon physician, was recently awarded the Legion of Merit at Mercer University, Macon. The commendation was read and the award presented by Col. John Meade, Professor of Military Science and Tactics at Mercer. Dr. Spright Dowell was principal speaker. Dr. Mays served in the Army Medical Corps during the war in the China-Burma-India Theater. The citation which accompaneid the Legion of Merit given Dr. Mays reads: "For exemplary and meritorious service and keen judgment in line of duty."

* * *

The Second District Medical Society held its semi-annual meeting at Radium Springs, Albany, April 22. Papers were read by Drs. Frank W. Buckner, Albany; Frank F. Kanthak, Atlanta; Edward S. Armstrong, Albany; and Carl S. Pittman, Jr., Tifton. The following officers were elected: Dr. Ernest Wahl, Thomasville, president; Dr. J. P. Tye, Alhany, vice-president; and Dr. J. C. Brim, Pelham, secretary-treasurer. The fall meeting of the Second District Medical Society will be held in Thomasville, October 9.

* * *

Dr. Philip H. Nippert, Atlanta, recently spent a month studying the pathology of skin tumors at Harvard Graduate Medical School, Boston.

* * *

Dr. John W. Simmons, Brunswick, for many years a member of the Atlantic Coast Line Railway Surgeons Association, attended the annual convention recently held in Clearwater, Fla. Dr. Simmons extended an invitation to the group to hold the 1949 convention on Jekyll Island.

* * *

Dr. Charles Richards, a graduate of the University of Georgia School of Medicine, Augusta, announces his association with his father, Dr. W. Roy Richards, Calhoun, in the practice of medicine.

* * *

Dr. R. L. Rogers, Gainesville, was recently elected chairman of the State Board of Health to succeed Dr. C. L. Ridley of Macon, who resigned. The board also elected Dr. B. H. Minchew of Waycross vice-chairman succeeding Dr. Rogers. Mr. Robert F. Maddox, Atlanta banker, was made a board member emeritus for life.

* * *

Dr. V. P. Sydenstricker, Augusta, recently attended a meeting of the Board of Examiners for Specialists in Internal Medicine, San Francisco, Cal. The board, which is top authority in this field, is composed of nine members, including Dr. Sydenstricker.

* * *

The University of Georgia School of Medicine, Augusta, graduation exercises were held in the music hall of the Municipal Auditorium, Augusta, March 22. The graduation address was made by Dr. Reginald Fitz of Boston. Dr. G. Lombard Kelly, dean, conferred degrees to a class of 56 young doctors.

* * *

Dr. D. B. Ware, Fitzgerald's senior physician, moved

into the newly-completed Medical Arts Building, Fitzgerald, April 1, a date with a very special meaning. It was 50 years ago on that day he first began his medical career. Dr. Ware built the first hospital in Fitzgerald. Dr. J. E. Smith and Dr. Roy Johnson, Jr. also have offices in the Medical Arts Building, Fitzgerald.

* * *

Dr. M. K. Willoughby, formerly of Savannah Beach, announces the opening of his office at Alapaha for the general practice of medicine.

* * *

Dr. Murdock Equen, Atlanta, was elected to the Council of the American Broncho-Esophagological Association at a recent meeting in Atlantic City, N. J.

* * *

The Eighth District Medical Society held its semi-annual meeting in the Regional Health Building, Waycross, April 13. Program: Dr. Dan A. Jardine, Douglas, president, presiding. Invocation, Rev. Walter L. Moore, Waycross; Address of Welcome, Dr. Ansley Seaman, Waycross; Response to Address of Welcome, Dr. M. E. Winchester, Brunswick. "Psychosomatic Problems Created by Physicians", Dr. Arthur M. Knight, Jr., Waycross; "Erythroblastosis Fetalis and Rh Studies", Dr. C. W. Ketchum, Valdosta; Venereal Disease Control", Dr. Dan Bowdoin, Atlanta; "Diagnosis, Prevention and Treatment of Congenital Hemolytic Disease of the Newborn (Erythroblastosis Fetalis)", Dr. Harold W. Muecke, Waycross. Officers: Dr. Dan A. Jardine, Douglas, president; Dr. Ansley Seaman, Waycross, vice-president; and Dr. G. T. Crozier, Valdosta, secretary-treasurer.

* * *

Dr. Osler A. Abbott, Atlanta, held a clinic—"Pulmonary Neoplasms"—and gave a lecture—"Surgery of Congenital Heart Lesions"—at the annual postgraduate seminar sponsored by the Medical College of the State of Alabama, Birmingham, May 3.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, April 15. Program arranged by Drs. Mark S. Dougherty, Alton V. Hallum and Hugh Hailey. Panel Discussion—"Headache". "Physiology of Headache", Dr. James V. Warren; "Internal Medicine", Dr. Charles F. Stone, Jr.; "Neurology", Dr. Richard B. Wilson; "Allergy", Dr. Wm. R. Crowe; "Psychiatry", Dr. Wm. G. Whitaker; "Gynecology", Dr. George A. Williams; "Eye", Dr. Stacy C. Howell; "Ear, Nose, Throat", Dr. B. Russell Burke; "Histamine Headache", Dr. Robert C. Davis; "Traumatic Headache", Dr. Exum Walker.

* * *

The Southeastern Section of the American Urological Association announces receipt of a $1000 donation from Mr and Mrs. William R. McEwen, Ft. Lauderdale, Florida. The fund is to be used to stimulate research on the problem of "Urinary Bladder Dysfunction." An award of $250 will be made for the best essay presented before the annual meeting of the Southeastern section. Competition is open to men who have graduated from medical school within the past ten years. Further information may be obtained by writing to Dr. Russell B. Carson, 408 Sweet Building, Ft. Lauderdale, Florida, secretary-treasurer of the Southeastern Section of the American Urological Association.

* * *

The Seventh District Medical Society held its semi-annual meeting at the Dalton Country Club, Dalton, April 7. Program: Invocation, Rev. Jas. L. Clegg, pastor, First Baptist Church, Dalton; Address of Welcome, Dr. D. Lloyd Wood, Dalton; "Streptomycin", Dr. Truman Whitfield, Dalton, discussion by Drs. John M. McGhee, Cedartown and Fred Crenshaw, Rome; "Gastro-intestinal Allergies—Report of Two Cases", Dr. E. A. Rosen, Dalton, discussed by Drs. Raymond F. Spanjer, Cedartown, and Edward Bosworth, Rome; "Diagnosis of Cancer by Tissue and Fluid Smears", Dr. Ingrid Sturquis, Rome, discussed by Drs. M. M. Hagood, Marietta and Trammell Starr, Dalton; "Acute Coronary Insufficiency", Dr. Carl A. Hartung, Chattanooga, Tenn., discussed by Drs. Wm. P. Harbin, Jr. and Emmett Brannon, Rome. Officers: Dr. D. Lloyd Wood, Dalton, president; Dr. Lee H. Battle, Jr., Rome, secretary-treasurer.

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The Woman's Auxiliary to the Seventh District Medical Society met at the Dalton Country Club, Dalton, April 7. Program: "Presiding Officer", Mrs. Sam Anderson, Milledgeville, president-elect, Woman's Auxiliary to the Medical Association of Georgia; Welcome, Mrs. Fred Ragland, Dalton, president, Dalton Woman's Auxiliary; Response, Mrs. J. E. Billings, Calhoun; "Public Relations", Mrs. Eustace Allen, Atlanta, president of the Woman's Auxiliary to the American Medical Association; "A Discussion of Some Phases of the Educational Program for the Woman's Auxiliary", Dr. Edgar H. Greene, Atlanta, president-elect of the Medical Association of Georgia. Officers: Mrs. Wilbur Hall, Calhoun, district manager, and Mrs. Raiden Dellinger, Jr., Rome, secretary.

* * *

Dr. Murdock Equen, Atlanta, held a clinic—"Removal of Foreign Bodies from the Lungs and Stomach"—at the annual postgraduate seminar sponsored by the Medical College of the State of Alabama, Birmingham, May 4. Dr. Equen also gave a lecture before the seminar entitled, "Carcinoma of the Esophagus".

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The Harbin Hospital, Rome, announces in order to serve the public better and increase the services offered its patients, The Harbin Clinic finds it necessary to enter on an expansion program, and in view of this the building now occupied as a hospital must be utilized completely for clinical facilities.

The hospital has been in continuous operation for the past 40 years. Since Floyd County is fortunate in having such modern hospital facilities and will shortly have an addition opened by the Floyd Hospital, the directors of the Harbin Hospital feel that the best interests of the public can better be served by converting the entire hospital building to the use of the clinic.

The clinic will offer complete diagnostic and treatment facilities, including radium, enlarged laboratories, x-ray, electrocardiographic and other diagnostic procedures. The building will be modernized as necessary.

At present the following doctors are on the clinic staff: Dr. Robert M. Harbin, Jr., Dr. William P. Harbin, Jr., Dr. Lester Harbin, Dr. Geo. B. Smith, Dr. Warren Gilbert, Dr. Ed Bosworth, Dr. Tom Harbin and Dr. C. J. Wyatt. In the near future a pediatrician will be added to the staff.

* * *

The Upson County Medical Society held its monthly dinner meeting at the Hotel Upson, Thomaston, April 13. Twelve members and eight visitors were present. Dr. R. E. Dallas, president, presented Mrs. Myrtice Maxwell, who discussed the work of the Upson County Tuberculosis Committee and told of the need for organizing a tuberculosis association. Dr. T. C. Davison, Atlanta, was guest speaker of the evening and was introduced by Dr. J. M. Kellum. The title of his paper was "Abdomens I Have Known". Dr. A. H. Letton, Atlanta, showed a movie and gave a talk on "Carcinoma of the Stomach". Guests included Drs. Lewis Beason and R. C. Montgomery of Butler, Drs. M. M. Head and Douglas Head, Jr., of Zebulon.

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*The* JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

## POSTGRADUATE CLINICS

EMORY UNIVERSITY MEDICAL ALUMNI ASSOCIATION

June 2, 3 and 4, 1948

### WEDNESDAY

Date: June 2, 1948. Place: Grady Hospital.

*Dr. Russell Oppenheimer, Presiding*

9:00 a.m. Infectious Diseases — Chemotherapy and Antibiotics—Dr. Paul B. Beeson.

9:30 a.m. Viruses—Modern Concepts—Dr. William F. Friedewald.

10:00 a.m. Effective Dosage Schedule of Chemotherapeutic Agents—Dr. Arthur P. Richardson.

*Dr. Marion C. Pruitt, Presiding*

10:30 a.m. Anorectal Surgery—Dr. Edgar Boling.

11:00 a.m. Diagnosis of Carcinoma of the Bladder—Dr. Milus K. Bailey and Dr. Chester Fort.

11:30 a.m. Surgical Abdomen in Children — Dr. Charles Holloway.

*Panels*

1 - 2 p.m. Arthritis—Dr. R. Hugh Wood, Moderator. Discussors: Dr. Arthur M. Pruce, Dr. Carl Whitaker, Dr. Randolph Smith, Dr. Max Michael.

1 - 2 p.m. Obstetrical Emergencies—Dr. R. A. Bartholomew, Moderator. Discussors: Dr. C. B. Upshaw, Dr. E. D. Colvin, Dr. Stedman Glisson.

2 - 3 p.m. Diagnostic Technics—Contrast Media—Dr. Heinz S. Weens, Moderator. Discussors: Dr. Homer Swanson, Dr. James Warren, Dr. Donald E. Beard, Dr. David James.

2 - 3 p.m. Endocrine Therapy in Gynecology—Dr. John B. Cross, Moderator. Discussors: Dr. John Denton, Dr. George Williams, Dr. Hartwell Boyd.

3 - 4 p.m. Hematology—Modern Concepts—Dr. Chas. Hughley, Moderator. Discussors: Dr. B. J. Hoffman, Dr. Warren Matthews.

3 - 4 p.m. Wound Healing and Infections—Dr. A. O. Linch, Moderator. Discussors: Dr. Arthur Richardson, Dr. William Friedewald, Dr. Cleve Ward.

### THURSDAY

Date: June 3, 1948. Place: Emory University

*Dr. John Fitts, Presiding*

9:00 a.m. Liver Dysfunction—Dr. David James.

9:30 a.m. Thyroid Concepts—Drug Therapy—Dr. Arthur B. Coddington.

10:00 a.m. Diabetes—Modern Concepts—Dr. Walter Bloom.

*Dr. Edgar Greene, Presiding*

10:30 a.m. Progress of Anesthesia—Dr. William Galvin.

11:00 a.m. Tumors of the Spinal Cord and the Common Surgical Diseases Under Which These Masquerade—Dr. Edgar Fincher.

11:30 a.m. Acute Pancreatitis—Dr. D. Henry Poer.

*Panels*

1 - 2 p.m. Anticoagulant Therapy—Dr. David James, Moderator. Discussors: Dr. Charles F. Stone, Dr. Ben R. Thebaut.

1 - 2 p.m. Tumors of the Colon, Breast, Femal Generative Organs, and Biopsy Diagnosis—Dr. Elliott Scarborough, Moderator. Discussors: Dr. J. D. Martin, Jr., Dr. John Denton, Dr. Robert Brown, Dr. Everett L. Bishop.

2 - 3 p.m. Neurologic Discussion — Dr. William A. Smith, Moderator. Discussors: Dr. Richard Wilson, Dr. Edgar Fincher.

3 - 4 p.m. Psychosomatic Problems—Dr. Carl Whitaker, Moderator. Discussors: Dr. Arthur J. Merrill, Dr. Ira Ferguson.

3 - 4 p.m. Peripheral Vascular Diseases—Dr. Fred L. Cooper, Moderator. Discussors: Dr. Roy Robertson, Dr. Carter Smith, Dr. Cleve Ward.

### FRIDAY

Date: June 4, 1948. Place: Grady Hospital

*Dr. E. A. Bancker, Presiding*

9:00 a.m. Congenital Heart Diseases—Dr. R. Bruce Logue.

9:30 a.m. Mercurial Diuretics—Dr. Arthur J. Merrill.

10:00 a.m. Cardiovascular Disorders — Physiology of Circulation—Dr. James Warren.

*Dr. Russell Burke, Presiding*

10:30 a.m. Retinal Arteriosclerosis: Diagnosis and Significance—Dr. Alton Hallum.

11:00 a.m. Use of the Radium Applicator in the Nasopharynx—Dr. William B. Armstrong.

11:30 a.m. Lung Abscess—Dr. Osler Abbott.

*Panels*

1 - 2 p.m. Cardiology: Catheterization and Surgery—Dr. R. Bruce Logue, Moderator. Discussors: Dr. Robert Grant, Dr. Heinz S. Weens, Dr. Osler Abbott, Dr. James Warren.

1 - 2 p.m. Fractures—Dr. Walker Jernigan, Moderator. Discussors: Dr. Randolph Smith, Dr. Paul Rieth, Dr. Joe Boland.

2 - 3 p.m. Water Balance—Heart and Kidneys—Dr. Arthur J. Merrill, Moderator. Discussors: Dr. John Akin, Dr. Hayward Turner, Dr. Phillip Bondy.

2 - 3 p.m. Gastric Surgery—Dr. Ira Ferguson, Moderator. Discussors: Dr. Ebert Van Buren, Dr. Randolph Shields, Dr. Duncan Shepard.

3 - 4 p.m. Pediatric Problems—Dr. Roger Dickson, Moderator. Discussors: Dr. Richard Blumberg, Dr. Joseph Yampolsky, Dr. Lee Bivings, Dr. John T. Leslie.

3 - 4 p.m. Blood and Its Substitutes—Dr. James Warren, Moderator. Discussors: Dr. Darrell Ayer, Dr. John Akin, Dr. Irving Trincher.

NOTE: This year the alumni may bring their wives to the banquet at the Fulton County Academy of Medicine, Friday, June 4, at 7 p.m. The banquet tickets are five dollars per person.

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## PRINCIPLES OF EARLY MANAGEMENT OF HAND INJURIES

*1. Protection of the Hand*

Following injury, the hand is particularly susceptible to the development of complications leading to serious disabilities. For this reason it is important that the freshly injured hand be given the most careful protection against such complications as result from added infection, additional tissue damage and stiffening.

The principles governing the provision of this protection may be briefly stated as follows:

1—*Protection against added infection*

Any open accidental wound of the hand may be assumed to be contaminated. It is important that no additional infection be added. This requires:

a. Protection of the wound at once with a sterile dressing.

b. Avoidance of putting anything into the wound, such as instruments, gauze, applicators, sponges or any sort of antiseptic.

c. If any cleansing of the areas around the covered wound is done, it should be with soap and water only.

d. Avoidance of all efforts at treatment of the wound by exploration, debridement or repair of damaged structures until adequate facilities are available. Adequate facilities for this purpose should include a location where surgically aseptic technic is employed, adequate anesthesia, proper instruments, sufficient assistance, good lighting and the provision of a bloodless operative field.

e. Application of a sterile dressing which will protect against the entrance of foreign material. Such a dressing should be voluminous, firmly applied with moderate pressure, separating the fingers from each other, and should maintain the hand and fingers in the position of function.

f. Antibiotic drugs should be administered system-

atically, not locally, in full dosage. Tetanus antitoxin (or toxoid) should be administered when the conditions warrant.

2—*Protection against added tissue damage and deformity*

Immobilization of the hand is required in any major injury, whether the wound involves skin, tendons, nerves, joints or bones. Immobilization should be governed by the following principles:

a. Immobilization should be employed as soon as possible after receipt of the injury for protection from further tissue damage.

b. Following definitive treatment of the injury, the immobilization should be continued as long as may be required for healing to occur.

c. Immobilization should be in the position of function (position of grasp) in order to maintain optimum relation of bone fragments and of soft tissue structures.

d. The position of function in immobilization is necessary to prevent disabling deformities, contractures, muscle weakness and joint stiffening, and to insure the earliest return of usefulness after healing.

e. Flat splinting of the hand or any of its digits must be avoided at all times.

## CHEST PHYSICIANS

The Board of Examiners of the American College of Chest Physicians announces that the next oral and written examinations for fellowship will be held at Chicago, June 17, 1948. Candidates for fellowship in the college, who would like to take the examinations, should contact the executive secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The Fourteenth Annual Meeting of the American College of Chest Physicians will be held at the Congress Hotel, Chicago, June 17-20, 1948. An interesting scientific program has been arranged for this meeting, and speakers from several other countries are scheduled to appear.

## OBITUARY

*Dr. Luke Glenn Garrett, Sr.*, aged 68, well known Cobb County physician, died at his home in Austell, April 13, 1948. He was a native of Lithia Springs. He graduated from the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1902. Soon after graduation he began his practice in Cobb County, where he continued his service for 46 years. As well known in civic and official circles as he was in the medical profession, Dr. Garrett was former mayor of Austell, and served for a number of years as Cobb County commissioner. He previously served as a member of the Cobb County School Board, and at one time president of the Austell bank. He was a Mason, and a member of the Austell Methodist Church. He is survived by his wife, Mrs. Candacy R. Garrett, two sons, Dr. Luke G. Garrett, Jr., and John E. Cloud; one daughter, Miss Louisa Cloud; one grandson, Luke G. Garrett, III; one granddaughter, Patricia Ann Garrett, Austell; two brothers and three sisters. Funeral services were held at the Austell Grammar School Auditorium. Rev. George Southard, Rev. Wilson Tyson, Rev. Dorace Starnes, Rev. Rohert Hart, and Rev. Alfred Landers officiated. Burial was in Rose Hill Cemetery, Austell.

* * *

*Dr. James Allen Green, Sr.*, aged 66, beloved Clayton physician, died in an Atlanta hospital March 23, 1948. Dr. Green was a native of Rabun County. He graduated from the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1908. He began his career as physician at Buford, but soon returned to Rabun County to work among his own people. He had practiced medicine in Rabun and adjoining counties for some 38 years. He and Dr. J. C. Dover had been associated in the practice of medicine since 1910. He was a member and secretary-treasurer of the Rabun County Medical Society, a member of the Medical Association of Georgia, and a fellow of the American Medical Association. A Mason, a member of the Lions Club and a member and officer of the Clayton Methodist Church, he had served as mayor and councilman of Clayton and had heen a trustee of the local school for a number of years. Survivors include his wife, the former Miss Willie Buff; one daughter, Mrs. Alton C. Smith; three sons, Dr. J. A. Green, Jr., Athens; Major John W. Green, Ft. Leavenworth, Kansas; Allen B. Green, Clayton, and four brothers. Funeral services were held from the Clayton Methodist Church. Burial was in Clayton Cemetery.

* * *

*Dr. Ernest C. Harris*, aged 64, Sylvester physician, died in a private hospital April 26, 1948. Born in Alexander City, Ala., he was the son of the late Alfred C. and Josephine Harris. He graduated from the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1913. He had practiced medicine in middle and southeastern Georgia for more than 35 years, and in Sylvester for the past ten years. He was a member of the Worth County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association; and belonged to the Masons and the Shrine. Surviving are his wife; two daughters, Mrs. Joe B. Powell, Leesburg, and Mrs. C. R. Sutton, Albany; a son, Lt. Ernest C. Harris, Jr., of Trinidad, British West Indies; two brothers, and four grandchildren. Funeral services were held in Sylvester. Burial was in Alexander City, Ala.

* * *

*Dr. Alexander Graham Little, Sr.*, aged 79, outstanding citizen and one of the best known physicians and surgeons of Valdosta, died at his home of a heart attack April 9, 1948. Dr. Little was born in Lumber Bridge, N. C. He graduated from Bellevue Hospital Medical College, New York City, in 1898, and located in Rock Hill, S. C. In January of 1900 he moved to Valdosta. He was a member of the South Georgia Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association, the Southeastern Surgical Congress and the American College of Surgeons. He was a member of the Presbyterian Church and for a number of years served as elder. In addition, Dr. Little was a charter member of the Valdosta Rotary Club, a member of the Valdosta Country Club, and the Ocean Pond Hunting and Fishing Club. He was a leader in his profession and throughout South Georgia and North Florida was highly regarded as an outstanding surgeon and progressive citizen. Surviving are his widow, the former Miss Ida Schwing of Greenville, S. C., one son, Dr. A. G. Little, Jr., one grandson, A. G. Little, III, and one granddaughter, Adair Little, all of Valdosta. Funeral services were held Sunday afternoon. Burial was in Sunset Hill Cemetery, Valdosta.

**The centennial meeting of the Medical Association of Georgia will be held in Savannah in the spring of 1949.**

**WANTED—Private hospital, 130-bed capacity, wishes to employ full time assistant physician. Salary with home or complete maintenance subject to negotiations according to experience of applicant. Interesting and congenial working conditions. Application received in care of this *Journal*.**

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
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Vol. XXXVII Atlanta, Georgia, June, 1948 No. 6

# OLLIER'S DISEASE

*Report of Case*

ROGER W. DICKSON, M.D.
*and*
SHIRLEY M. COHEN, M.D.
*Atlanta*

Hereditary deforming chondrodysplasia is a relatively infrequent, but biologically interesting disease. It was described by Ollier in 1899, and thus was originally called Ollier's disease. Since then a long list of other names has been attached to it: multiple benign exostoses, multiple cartilaginous exostoses, multiple cancellous exostoses, multiple congenital osteochondromata, chondral dysplasia, diaphyseal enchondrosis, laminated exostoses, ossified diathesia, and hereditary deforming chondrodysplasia[1].

The condition is rarely recognized at birth, but is usually noticed during childhood. Bony projections arise at varying times throughout childhood until adolescence is reached, when growth of all the exostoses slows down. According to Geshicter[2], these exostoses and irregular projections progress until normal skeletal growth ceases. No new lesions form during adult life. The long bones are affected and only in severe cases will lesions appear on metacarpal and metatarsal bones, phalanges, ribs, innominate bones, and vertebrae. Occasionally the cartilaginous portion of the base of the skull is involved. The changes are most common at the ends of long bones, where growth in length is most rapid; for example, the humerus, ulna, radius, and tibia. In Maffucci's syndrome the small bones of the hands and feet are the sites of the lesions, which are usually associated with hemangiomata. In this syndrome enchondromata are the distinctive features in contrast to the osteochondromata of Ollier's disease[3].

Microscopically, the pathologic changes consist of osteochondromata. Disorderly development of cartilage and irregular ossification occur at the metaphysis[4]. A connective tissue membrane may form between the areas of modified bone and the overlying muscle. The periosteum of the unaffected part of the shaft of the bone continues over the region of exostosis.

Grossly, the epiphyseal end of the shaft is wider and blunter than normal. The surface is knobby and bumpy. These areas may be covered by bursae. The limbs are shorter than normal in relation to the trunk. This is not due to interference with longitudinal growth at the epiphyses as in achondroplasia, but to dissipation of the growth force in a lateral direction at the metaphysis[5]. Bowing and scoliosis may result. The x-ray examination shows irregularly expanded diaphyseal masses with thin cortex or multiple bony outgrowths at the metaphysis[4].

There are two clinical types: One is characterized by irregular deforming outgrowths confined to one extremity or one side of the body, while the other type consists of multiple roughly symmetrical osteo-

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Figure 1
Upper extremities of father of patient. There is marked bowing of bones with cyst-like cartilaginous exostoses producing the most distortion in the humerus.



Figure 2
Radiograph of both knees of the paternal uncle of patient. There is marked widening of bones with cyst-like areas of cartilaginous exostoses.

cartilaginous tumors identical with osteochondromata[4].

These bony outgrowths do not shorten life, but may cause complications. Pressure symptoms on nerves, tendons, or blood vessels may indicate surgical removal of the bony projections causing the pressure. Synosteosis or interference with articular function may occur. Rarely do malignant changes develop with the osteochondromata, resulting in chondrosarcoma. If this happens, it usually occurs in the adult. However, Bennett and Berkheimer[6] described a case of malignancy in a boy ten years of age. This malignancy may break into the venous channels, causing rapid death, or it may grow slowly with only local invasion. Treatment is amputation; if this is refused, deep x-ray therapy may be employed.

Hereditary deforming chondrodysplasia, as the name implies, is transmitted in families. The transmission is that of a dominant factor. It is three times more common in males than in females. In the female the disease may be latent. One-half of the siblings of the parents, one of whom has multiple exostoses, will show this condition. The older children are more likely to inherit it[7]. An unaffected male parent does not transmit the disease to his children, but an unaffected female parent may do so. If the parents have few exostoses, the children will have few; if they have many, the children will, as a rule, show many. The number of bony lesions in any one family tree increases from generation to generation.

## REPORT OF CASE

W. H. T., a 22 month old white male, was brought to the Pediatric Out-Patient Department of Grady Memorial Hospital, Atlanta, because of bony prominences on his ribs, on the upper end of the left tibia, and on the upper end of the right humerus. The growths on the long bones were discovered at 21 months of age. The child had had no previous illnesses and, except for being small in size, had developed normally. His weight was 21½ pounds; height was 32 inches. Bony projections were felt along the anterior axillary regions of the ribs. Almond-sized osseous growths were also felt at the upper ends of all long bones, most marked at the distal ulnae, proximal humeri, distal femora, and proximal tibiae. The long bones were slightly diminished in length. Blood calcium level was 10.8 mg. per cent; blood phosphorus level was 2.9 mg. per cent. Alkaline phosphatase was 1 Bodansky unit. A diagnosis of hereditary deforming chondrodysplasia was made.

It was found that the patient's father had marked bony projections of his long bones and shortening of his limbs. He was five feet, two inches in height. On x-ray examination these exostoses were seen to produce

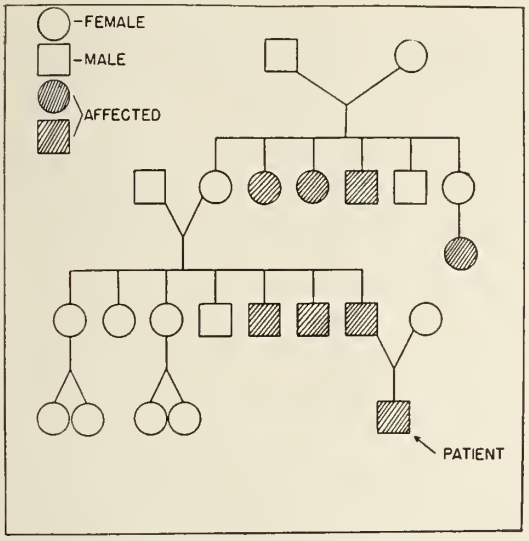



**Figure 3**
**Chart showing hereditary tendency in Ollier's disease.**

some deformity and moderate bowing of the bones (Fig. 1). Except for the deformities, he had not been inconvenienced by the lesions.

Two paternal uncles also had numerous conspicuous exostoses on the long bones (Fig. 2). One uncle had had a prominence on his humerus removed surgically because of interference with articular function. One paternal uncle and two paternal aunts were unaffected. The two aunts had two children, both of whom were well.

The transmission of this disease was through the paternal grandmother (Fig. 3). She herself had no apparent lesions, but two of her sisters had a few small bony projections, and one brother had many large ones. One sister and one brother were unaffected. A son of the unaffected sister had no bony outgrowths.

*Summary*

A case of hereditary deforming chondrodysplasia in a 22 month old child has been presented, with the family background and a brief discussion of the disease.

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## HEALTHGRAM

The unsolved problems of public health and preventive medicine lie in the field of health protection and health promotion of the adult, particularly the young adult, who is the most productive member of society. It is also quite clear that problems of adult hygiene cannot be solved by the methods of mass approach. Medicine in the Changing Order, Rep. New York Academy Med. Comm., The Commonwealth Fund, 1947.

# ECLAMPSIA

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*Tifton*

Although 95 per cent of our obstetric cases follow a fairly normal course except for the ungodly hours involved, the other 5 per cent include those cases that we just as soon someone else handled. Among this 5 per cent fall the cases of eclampsia, and it is about this particular group that I will limit my discussion.

In an effort to define eclampsia we might classify it as a convulsive disease peculiar to the later months of pregnancy, usually characterized by high blood pressure, marked albuminuria, and edema. It is usually associated with progressive symptoms of headache, dizziness, disturbance of vision, epigastric pain, tonic and clonic convulsions, sometimes coma, and sometimes death.

Eclampsia is not a new disease, for convulsive attacks during pregnancy have been described by ancient writers; but it does seem to be a disease endemic to woman, since there is no similar disease reported in animals.

The incidence of eclampsia varies in different localities and in different countries. It is more common in cold than in tropical countries; yet the incidence in the southern part of the United States is about the same as that in the northern states. Various observers have felt that seasons or the weather influence the frequency of occurence. Davis and Harrar noted a greater number in the New York Lying-In Hospital in April; Zinsser found more in the spring or autumn associated with sudden changes in the weather or a drop in temperature.

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Hinselmann stated that eclampsia occurred once in 68 deliveries of primigravidas and once in 4,000 deliveries in multigravidas. Griefenstein reported 212 cases of eclampsia in 20,000 deliveries in Bonn, an incidence of one case of eclampsia in 98 deliveries. The frequency of recurrence of eclampsia is not great. Laun, in reviewing the literature, stated that the per cent of recurrences of eclampsia is between 1.5 and 8. Schmechel reported 238 cases of eclampsia in 27,430 deliveries, or one in every 115 deliveries—83 of the 238 patients experienced subsequent pregnancies; 33, or 40 per cent of whom had eclamptic symptoms; and 15, or 18 per cent had eclampsia. Griefenstein noted that of 78 patients with eclampsia who subsequently became pregnant, two had a recurrence of eclampsia, an incidence of 2.6 per cent.

There are many hypotheses advanced as to the cause of pre-eclamptic toxemia and eclampsia but none has been generally accepted due to failure to answer the following questions:

1. Why does this disease occur in the later months of pregnancy?
2. Why do two-thirds of the cases occur in primiparas and why may it occur in cases of hydatidiform mole without the presence of the fetus?
3. Why should it occur more frequently when the uterus is overdistended by hydramnios or multiple pregnancy?
4. Why does it occur more rarely in the tropics than in more temperate climates?
5. Why does adequate prenatal care so markedly reduce the incidence of eclampsia?
6. What is the toxic substance which causes one pregnant woman to have eclampsia but not another woman under the same external conditions; what is the toxic substance which causes the same woman to have eclampsia in one pregnancy and not in a subsequent pregnancy?

When some basis for answering these questions is established, we may be able to determine a causative pattern for the occurrence of pre-eclamptic toxemia and eclampsia.

In 1843 Lever expressed his thought that eclampsia is due to uremia. Fitzgibbon expressed the belief that the cause of eclampsia is failure of the organs of elimination to take care of the extra demands incident to pregnancy. Casamanda, however, found no association between eclampsia and kidney toxemias.

Some observers have advocated that these toxemias are of infectious origin. Some suggest that they are due to absorption of infected placental infarcts. Theobald observed the almost complete absence of toxemia of pregnancy in Siam where dental and urinary infections are quite prevalent.

Theobald raised the question whether the low incidence in Siam and countries with similar climates and customs may be the result of high vegetable diet and ample sunshine. The effect obtained by attention to the diet in prenatal care would tend to strengthen this hypothesis. Prenatal care also tends to promote elimination and to reduce whatever poison may collect in the intestinal tract, a fact which Tweedy, McPherson and others have expressed as constituting a potent factor. Despite all of these theories, the question still remains: Why should dietary disturbances and the lack of elimination cause this type of toxemia in the pregnant, and not in the nonpregnant woman?

Other foremost theories regarding the cause of eclampsia include those of endocrine imbalance, fetal toxins absorbed into the maternal circulation, placental autolysis, accumulated sodium chloride with edema and associated cerebral anoxemia, and faulty protein metabolism. Many of the theories have much sound reasoning behind them but to date none of them seem to be quite adequate in their explanation as to the cause of eclampsia.

Ordinarily eclamptic convulsions are preceded by warning symptoms: edema, severe and often persistent; diffuse headaches, disturbances of vision, such as flashes or spots before the eyes; dizziness, and epigastric pain. Most of the time the patient will consult a physician because of

one or more of the symptoms or she may be unaware of their serious significance until the onset of the convulsive seizures. Other prodromal symptoms may be nervous irritability, muscular twitching, restlessness, and sleeplessness. Occasionally, unusual drowsiness may precede the attack.

An eclamptic convulsion presents typical features resembling most nearly an epileptic attack. The eyes are staring and fixed, usually with dilated pupils. The face is flushed, with veins distended. The clonic movements may last for 30 to 60 seconds and may be followed by tonic rigidity for a somewhat shorter period. The breathing, which was shallow or absent during the clonic period, becomes deep and stertorous. Usually the patient is more or less cyanosed. Urine and feces sometimes pass involuntarily. The woman may pass into a state of coma lasting from a few minutes to several hours. There is usually a rise in blood pressure and temperature. Fever is apparently due to a disturbance of the thermal center rather than to infection. In the most favorable cases no further convulsions ensue; in other cases the patient may improve only to have convulsions days, or even weeks, later—the so-called recurrent eclampsia. In the most serious cases the convulsive seizures may return within a few minutes or few hours. As the convulsions recur they become more severe and more frequent with gradually deepening coma and death.

The number of convulsions is not necessarily an index of the severity of the condition because cases have been known to recover after having one hundred convulsions. Convulsions may occur in pregnancy, labor, or parturition. The convulsions usually occur in the last month of pregnancy, at or near term; somewhat more than half occur prior to the onset of labor; about one-fourth during labor, and approximately one-fifth later.

*Prognosis*

Eclampsia causes 2.9 per cent of the total deaths from puerperal causes. Reinberger and Sherren reported 42.4 per cent mortality following cesarian section for eclampsia, and Stroganoff reported 2.5 per cent maternal mortality in the conservative treatment of eclampsia. Greenhill reported a maternal mortality of 10.3 per cent prepartum, 0.0 per cent for intropartum, and 8.7 per cent for postpartum eclampsia. The highest death rate is in prepartum eclampsia, especially in primigravidas. Death during convulsions may result from cardiac failure, pulmonary edema and cerebral vascular injury. Most of the patients who recover from convulsions will live, although death may occur later from aspiration pneumonia, or sepsis, for these patients resist infection poorly.

*Treatment*

Eclamptic convulsions present an emergency requiring immediate treatment. It is obviously necessary to control convulsions no matter at what stage they occur. A majority of the convulsions occurring before labor or during labor cease when the uterus is emptied. This led to the employment of so-called "radical methods" for immediate termination of pregnancy rather than conservative measures.

Conservative treatment in its strictest sense deals with measures for control of convulsions; delivery of the patient is not forced although measures may be used to shorten the second stage of labor.

Modified conservative treatment employs measures to control convulsions or to prevent impending convulsions. These are: induction of labor in some instances following control of convulsions, employment of measures to shorten the second stage of labor, delivery of certain cases by cesarian section when the convulsions have

been controlled or when attempts to control convulsions have failed, or in some cases of impending eclampsia.

Radical treatment consists in immediate emptying the uterus by abdominal cesarean section in each case in which convulsions appear if the patient is not in labor, and in some instances during the first stage of labor; or by shortening the progress of the first stage of labor by forcing dilatation of the cervix and delivery by version or forceps.

Every case of eclampsia will present its own individual problem which will have to be dealt with in accordance to the facilities at hand and the individual skill of the attending physician. In this country the general concensus of opinion is that the most satisfactory results are obtained by following a plan of *modified conservatism.*

In treating a patient according to the modified conservative plan, we hospitalize the patient immediately. If hospitalization is totally out of the question, the same therapeutic measures should be carried out in the home.

The first step is to control the convulsions. This can usually be achieved by giving the patient 1/4 grain of morphine, in 2 cc. of 25 per cent magnesium sulfate, intramuscularly. This may be repeated in one hour or less if convulsions continue or impend. When repeating the morphine, attention should be given to the respiratory rate and this rate should not be retarded to less than ten per minute. Chloral hydrate in 20 to 40 grain doses per rectum may be given in conjunction with the morphine. This can be repeated every four to six hours. The barbiturates intravenously are also a great help in getting the convulsions under control.

When the diastolic pressure is 120 mm. of mercury or more, and convulsions are impending, it may be advisable at times to perform a venesection and withdraw 300 to 500 cc. of blood. Venesection usually lowers temporarily the blood pressure, probably relieves the cerebral and glomerular vascular congestion and indirectly increases the output of urine. The blood withdrawn should be analyzed for sugar, $CO_2$ combining power, N.P.N., and chlorides. Close attention should be given to urinary output and urine analysis. The patient should be given 500 cc. of 20 per cent dextrose solution intravenously. This is given very slowly over a period of 30 to 45 minutes. This may be repeated in four hours and may be repeated several times. If the patient is not edematous, or after the urine output has increased, the concentration of the solution of dextrose is reduced to 10 per cent, and it is best given in normal saline. If the solutions are given too rapidly, pulmonary edema may develop. Muscular irritability or twitching may follow too great a loss of chlorides in which case 2000 or 3000 cc. of 10 per cent glucose in normal saline may be given daily over a period of several days.

Ten cc. of 25 per cent magnesium sulfate may be given intramuscularly or 20 cc. of a 10 per cent solution of the same solution may be given intravenously. None should be used if the $CO_2$ combining power of the blood is less than 20 volumes per cent, or if the patient is in coma.

During convulsions the patient's tongue is protected from lacerations by a padded mouth gag. Cyanosis and pulmonary edema are combatted by inhalation of 5 per cent $CO_2$ in $O_2$. If dextrose intravenously fails to control acidosis, a solution of 5 per cent soda bicarbonate may be used. Most authorities warn against the use of any inhalation anesthesia for the relief of convulsions due to the tendency to raise the blood pressure or due to the liver damage it may produce.

When the convulsions have been controlled, subsequent treatment depends on

several conditions. With the cessation of convulsions there may be improvement in other symptoms and convulsions may not recur. Under such favorable conditions, if the fetus is living and is below the period of viability, the patient may possibly be carried on to term. Following this pending improvement, convulsions may recur hours or days later. Warning of this is usually given by rise in blood pressure, more marked changes in the ocular fundi, persistence or even increase of albuminuria, and development of acidosis.

When symptoms indicate impending recurrence of convulsions, or during a remission in severe cases, or in less severe cases when symptoms are becoming less favorable, many obstetricians advocate the induction of labor.

Many measures for terminating pregnancy have been advocated, but the obstetrician will usually employ the method which has proved most efficient in his hands. In case of no disproportion and the case is not too urgent, it is advisable to administer castor oil in 1 to 2 ounce doses by mouth or tube. This may be repeated in 24 to 48 hours. When this fails or symptoms are urgent, a number four, or preferably number five, Voorhees' bag is inserted in the cervix and lower uterine segment and is partly filled or fully distended with sterile water. This measure is best carried out under analgesia alone. It is sometimes advisable to rupture the membranes before inserting the bag, and for many multiparas rupture of the amniotic sac alone is sufficient to initiate labor promptly. Many patients will go into active labor within 12 hours after rupturing the membranes.

Fortunately, most eclamptic convulsions occur at or near term and in such cases after convulsions are controlled labor may be induced, if it does not begin spontaneously. However, labor often occurs as a result of muscular irritability resulting from the toxemia. Labor should be conducted with all possible freedom from pain and with the least possible trauma to the mother. Forcible dilation of an undilated cervix with its associated trauma is inadvisable because trauma may cause shock or may lead to infection, both of which are especially dangerous. When the second stage of labor is reached, unless the progress of labor is rapid, it is usually advisable to shorten the second stage by the application of forceps or by version.

Some able obstetricians advise abdominal cesarian section in eclampsia and in many severe cases of pre-eclamptic toxemia, especially for primagravidas if the fetus is living. There is no question of the advisability of such section in those cases of disproportion, if the patient gives reasonable evidence of being in condition to survive the operation. In many cases cesarian section has been done ill-advisedly. Statistics have repeatedly shown that the maternal mortality rate is much lower when a conservative plan of treatment is carried out. This is especially true in unskilled hands and in poorly equipped surroundings.

The occurrence of postpartum eclampsia is one of the strongest arguments against radical measures, for it proves that emptying the uterus may not stop or prevent convulsions. Any case of pre-eclamptic toxemia is a potential case of eclampsia for 24 to 48 hours after delivery and sedatives and other measures are continued for several days.

Although most patients with eclampsia improve immediately after delivery, care should be taken in diet, in elimination and in avoidance of factors irritating to the nervous system. The diet low in protein is continued while the patient is in the hospital. Salt is added to the food when edema has disappeared and fluid is usually given freely. Attention is given to the urinary output, for occasionally there is partial or

complete suppression of urine after convulsions have ceased. In such cases fluids should be given guardedly, for anuria may be due to such acute congestion of the kidney that the glomeruli can not function. In such rare instances the operation of renal decapsulation may be advised.

Readings of the blood pressure and the output of urine should be recorded daily. As a general rule, the patient should be kept in bed until the systolic blood pressure has dropped to less than 140 mm. of mecury or until the albuminuria is reduced to a grade two, if possible. When the blood pressure is not normal in two weeks, the development of a chronic nephritis is suspected. There should be some plan of re-examination of these patients for at least one year postpartum. Such careful observation will usually reveal many cases of chronic nephritis which have been aggravated by the pregnancy or which have developed subsequent to eclampsia.

*Summary*

1. Eclampsia is a convulsive disease of undetermined cause, which usually occurs during the latter months of pregnancy.

2. Eclampsia is a disease whose mortality and morbidity are definitely lowered by proper prenatal care.

3. Leading obstetricians, backed by definitely convincing statistics, advocate a modified conservative treatment.

AMERICAN CONGRESS OF PHYSICAL MEDICINE

This Congress will hold its twenty-sixth annual scientific and clinical session Sept. 7, 8, 9, 10 and 11 inclusive, at the Hotel Statler, Washington, D. C. Scientific and clinical sessions will be given the days of Sept. 7, 8, 9, 10 and 11. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will he held Sept. 7, 8, 9 and 10. These courses will be offered in two groups. One set of ten lectures will be based primarily on physics and physiology and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to physical therapists. The physical therapists must be registered with the American Registry of Physical Therapy Technicians. Full information may be obtained by writing to the Ameican Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

# REACTION TO BLOOD TRANSFUSION

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The earliest records of blood transfusion are found in Greek mythology and throughout the ancient Egyptian writings[1]. The nature, function and medicinal properties of blood have always been subjects of interest throughout medical history.

Until Sir William Harvey discovered the circulation of the blood, in 1616, blood transfusion was scorned, especially by the church. Following this, and the discovery of the mechanism of circulation of the blood in 1628, there are numerous records of attempts at transfusing patients with human and animal blood.[1 2 3]

The advent of aseptic surgery, introduced in 1867 by Lister, and the discovery of the hemolysins in human serum by Bordet in 1898, were great steps toward successful transfusions. Following up the work of other men, Jansky worked out the four blood groups in 1907, and in 1908 Ottenberg applied the work of Jansky clinically and developed methods of bloody typing[4].

The work of many others has contributed to a safer transfusion technic until today the use of whole blood as a therapeutic measure is at an all time high. It still is not without its dangers, however, and the greatest care should be taken in prescribing this method of therapy. Due to the margin of human error plus our lack of knowledge, untoward reactions are unavoidable even under the best conditions. Nevertheless, complications should be kept at a minimum and should always be watched for, recognized, and properly treated when they occur. The incidence of untoward reactions with present day methods is at a new low

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of approximately 3.0 per cent.[5 6]

The complications of blood transfusions may be outlined as follows[7]:

1. Immediate untoward reactions.
   a. Hemolytic.
      1. Intravascular hemolysis of incompatible donor cells.
         a. Intergroup (A, B, AB, O)
         b. Intragroup (Rh)
      2. Intravascular hemolysis of recipients' cells.
      3. Intravascular hemolysis of compatible donor cells.
      4. Transfusion of hemolyzed blood.
   b. Pyrogenic.
   c. Allergic.
   d. Circulatory overload.
   e. Embolic.
2. Transmission of disease.
   a. Infectious hepatitis.
   b. Malaria.
   c. Syphilis.
   d. Other diseases.

Though small in number, hemolytic reactions resulting from the infusion of incompatible cells is the most important of the above group since it is often fatal. Pyrogenic reactions rank second because of their frequency, being by far the most common type of post-transfusion complication.

## I. Immediate Untoward Reactions

### A. *Hemolytic Reactions*

1. *Intravascular hemolysis of incompatible donor cells.* This type of reaction occurs when A, B or AB blood is given to an O, when B or AB is given to an A, or when A or AB is given to a B. The results of such infusion can best be discussed in two groups, the immediate or hemolytic crisis and the late or renal complications.

The symptoms of the hemolytic crisis vary from none to very severe and may begin after only 20 to 50 cc. are given, or after the whole 500 cc. are administered. The reaction most commonly begins after 100 to 200 cc. have been given.

The patient usually suffers a chill, pain in the lower back, substernal oppression or pain, and maybe nausea, vomiting and incontinuence. The blood pressure rises with the onset of the reaction but may drop to shock levels with a weak, thready pulse, and plasma or compatible blood transfusions are indicated here just as with any other cause of "clinical shock."

Following the chill and shock, if present, the temperature rises to 102° to 104°F. The first urine passed after the onset of symptoms is dark reddish-brown or port wine colored. It contains many red blood cells and gives a positive test for hemoglobin. The initial reaction is rarely fatal and the patient often recovers from these symptoms in an hour or so.

Following recovery the patient may show (a) no further signs other than a transient hemoglobinuria or transient jaundice; (b) transient oliguria with increased nitrogen retention and then diuresis and recover, and (c) persistent oliguria with uremia and death. If the patient has received less than 250 cc. of incompatible blood, the prognosis is good, if over 500 cc. it is grave[7]. Death from renal damage usually occurs in from four to ten days.

The pathologic changes, as seen in the kidney at autopsy, are not specific and cannot be distinguished from renal shutdown due to the sulfonamides, shock or the crush syndrome. The kidney is large and pale and when cut the cortex is markedly thickened and pale. Microscopically, there are normal glomeruli and the convoluted tubules show slight regeneration, presumably following cellular damage. The collecting tubules show pigmented, acellular casts, with degeneration of the surrounding epithelium.

Treatment of this condition is unsatisfactory and inadequate. With the onset of symptoms the transfusion must be stopped, of course. The immediate reaction is rarely fatal and the only treatment needed is that for shock if it occurs.

There are many plans of therapy for both the treatment of and prophylaxis of renal shutdown. Alkalinization of the urine is the most widely used form of treatment, the theory being that hematin is more apt to precipitate in the kidney tubules in an acid urine.[8 9] The argument against alkalinization is that by the time it can be affec-

ted, the renal damage will probably already have occurred. Also fatal transfusion reactions due to uremia have occurred in patients with a constant alkaline urine and some investigators[10] have reported that the kidney will clear hemoglobin better in the presence of an acid urine.

The best method of administering alkali is in the form of a lactate, for sodium bicarbonate by mouth is poorly tolerated and is difficult to sterilize for intravenous infusion because of the formation of sodium carbonate in the solution. Care should be taken with the administration of any of these solutions lest alkalosis develops and lest the fluid intake adds to the water-logging caused by the urinary retention, and pulmonary edema result.

Due to the fatality of reactions caused by incompatible blood, the utmost care should be used in their prevention. They are most commonly caused by laboratory errors of labeling the specimens and of the technical procedures of cross-matching. With careful attention to these matters they can be kept at a bare minimum.

Intravascular hemolysis due to incompatible donor cells is also seen with the infusion of Rh positive cells into a Rh negative person who has been sensitized against the Rh factor. This factor is present in the red blood cells of 87 per cent of the white race and 94 per cent of the Negro race. A reaction does not occur with the first infusion of red cells, and frequently requires several infusions before sensitivity develops.

In women the transfusion of blood is not the only method of sensitization or precipitation of a hemolytic reaction. This may be done by the conception of an Rh positive child, by an Rh negative mother and the subsequent transfer of some of the child's red blood cells into the mother's circulation. This can precipitate an attack of erythroblastosis fetalis in a primigravida if the Rh negative mother has been previously sensitized by an Rh positive transfusion. Also the reverse can happen, and an Rh negative multipara can have a fatal reaction from one transfusion if pregnancy has sensitized her.

Diamond, who has done much work in this field, believes that all patients should have an Rh type run before transfusion, even if only one transfusion is anticipated. He reported one case of an Rh negative patient who received a reaction from Rh positive blood twelve years after he had received 1000 cc. of Rh positive blood[11].

2. *Intravascular hemolysis of recipient's cells.* The only practical time this might happen is when a patient with type A, B or AB blood is given a transfusion with type O blood, the universal donor. Some workers[12] have found that the infusion of blood from universal donors into patients of other blood groups may result in a hemolytic reaction, especially if the agglutinin titer of the donor's serum against the recipient's cells is 1:32 or higher and more than 200 cc. of this blood are given[5]. Therefore, unless agglutinin titers are run routinely on universal donors, this type of transfusion should be avoided unless as a life-saving procedure.

3. *Intravascular hemolysis of compatible donor cells.* This usually occurs with the administration of blood that has been stored too long or at too high a temperature. The reactions from this are rarely fatal but the blood does the patient little or no good, since the red cells are destroyed and the free hemoglobin is soon converted to bilirubin.

Blood drawn in plain citrate solution should not be kept over five days. Blood drawn in Alsever's solution (dextrose, 2.05 per cent; trisodium citrate, 0.8 per cent; sodium chloride, 0.42 per cent) or in acid-citrate dextrose solution (dextrose, 3 per cent; trisodium citrate, 1.34 per cent; citric acid, 0.47 per cent) may be

stored up to twenty-one days. The temperature of storage must at all times be betweent 4° and 10° C[7].

4. *Transfusion of hemolyzed blood.* There has not been much written on this subject but there have been occasional reports of fatal anuria resulting from such transfusions. The administration of hemolyzed blood is usually accidental and results when blood has unknowingly been frozen and subsequently thawed without observation of the hemolysis.

### Pyrogenic Reactions

Because of the relative frequency of pyrogenic reactions they rank second in importance. Figures from Michael Reese Hospital in Chicago show that with a total reaction rate of 3.0 per cent, pyrogens are responsible for 2.2 per cent[6]. An indication of the severity of pyrogenic reactions can be obtained from their figures, since they classify nearly three-fourths of these as minor reactions.

The term "pyrogen" means "fever-producing substance" and it is now thought to be foreign protein rather than the citrate solution, as was earlier believed. This material may be inspissated blood of plasma; bacteria, viable or nonviable and their by-products, especially of the gram-negative group; or foreign matter on new glassware or new tubing.

The greatest care should be used in the cleansing of all equipment used in a blood transfusion. Also, it is necessary that all water used in solutions and in the final washing of collection and administration sets be distilled water. Sterile water is not sufficient, since it may contain metabolic by-products of bacteria even though the organisms themselves are dead.

Pyrogen reactions vary from a slight fever to chills, high fever, cyanosis and marked prostration. The severity of the reaction depends on the amount of pyrogen present and the condition of the patient, those suffering from a septic condition being more prone to have pyrogenic reactions. The temperature usually returns to normal within four hours and the outcome is rarely fatal, although the patient may even become nauseated, vomit and become incontinent.

The occurrence of a chill during the administration of whole blood or a red cell suspension calls for immediate cessation of the infusion. It may mean a cross-match error with the administration of incompatible blood or contamination with pyrogen, a large amount of which might prove dangerous. If stoppage of the transfusion does not bring relief, then therapy should be begun as described under incompatible transfusions.

### Allergic Reactions

These may occur during or following transfusion of whole blood, plasma or human serum albumin. The incidence of such reactions runs a little more than one-fourth of the total reactions.[5 6]

Urticaria is the most common allergic complication in nearly all series of cases. Its appearance does not necessarily mean that the infusion must be stopped, but the patient should be treated promptly. It responds readily to the subcutaneous injection of 0.3 mg. of epinephrine. Asthma and signs of laryngeal edema indicate prompt discontinuance of the infusion and treatment with epinephrine.

Allergic reactions are presumably due to allergens contained in the blood of the donor. For this reason, it has been advised to use fasting donors and, whenever possible, individuals suffering from major allergies should not be used as donors.

### Circulatory Overload

Blood may be transfused very rapidly when the patient's condition is associated with a reduced blood volume. When blood is administered to a patient in severe shock it is not only permissible but advisable

that it be given at a rate of 50 to 75 cc. per minute[7]. Such is not the case with every patient and the reception of 500 cc. of any type fluid may be sufficient to cause a circulatory overload and a resulting pulmonary edema.

In the absence of shock, it is advisable to start the transfusion very slowly and then speed it up after the infusion of about 100 cc. With this method, most hemolytic reactions will be detected before more than 100 to 200 cc. of blood will have been given.

### Embolic Reactions

Blood and plasma must be filtered immediately prior to administration to remove any particles present. The universal practice of this procedure has about eliminated the possibility of emboli with the exception of an air embolus. This is occasionally seen when blood is forced in under pressure. It should never be resorted to unless a responsible person is in constant attendance and pressure must be released when the bottle nears empty or when the blood runs in, it may be followed by an air embolus.

### II. Transmission of Disease

a. *Infectious hepatitis.* It has been definitely established that infectious hepatitis may be transferred from one person to another by blood transfusion. It has not been determined how long a person remains infectious after the symptoms of the disease disappear, but it is thought that the causative organisms may remain in the blood stream for many months[1]. Since there is no evidence that refrigeration affects these organisms, no person who has had infectious hepatitis should be used as a donor.

b. *Malaria.* Malaria has been transferred by transfusion. It is a known fact that the organisms remain in the blood stream for many months and the period of storage to insure death of the parasites is uncertain. Accordingly, persons who have had malaria should not be used as donors.

c. *Syphilis.* Syphilis has been transmitted by transfusion, usually in the early stages before the serologic tests are positive. Refrigeration at 4 or 5° C. for one to three days will probably render the organisms incapable of producing the disease.

A Kahn test must be run on all blood to be used for transfusion and, when possible, all blood should be stored at 4 to 5° C. for at least twenty-four hours prior to transfusion. Persons who have had syphilis or have a history of genital sores or discharge within six months should not be used as donors.

d. *Other diseases.* In the past years most of the infectious diseases have been transferred from one person to another by blood transfusion. This possibility should be borne in mind, especially when it is known that the donors have been exposed to infection.

### Conclusion

Besides the untoward results that may occur with a transfusion reaction, it is debatable whether or not the patient receives any benefits from the blood. One group of workers[6] says the undestroyed transfused cells last equally long even after a chill. Most writers disagree with this opinion, however, and one worker[13] says that a transfusion followed by a reaction is 50 per cent less effective in raising the hemoglobin than one given without a reaction.

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# THE COMPLICATIONS OF BLOOD TRANSFUSION

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"Transfusion: the transmission of blood from one living animal to another by means of a canula. Harvey worked thirty years before he could get his discovery admitted, though the most ardent proofs of it were everywhere perceptible, but as soon as the circulation was acknowledged people's minds were seized with a sort of delirium: It was thought that the means of curing all disease was found, and even of rendering man immortal. The cause of all our evils was attributed to the blood; in order to cure them nothing more was necessary than to remove the bad blood and to replace it by pure blood drawn from some sound animal. . . . However, some sad events happened to calm the general enthusiasm . . . a patient so treated fell into a state of madness a short time after the experiment. He was submitted a second time to transfusion, and he was immediately seized with a hematuria and died in a state of sleepiness and torpor. A young Prince was also a victim of it. The Parliament of Paris prohibited transfusion. A short time after a transfusion having been performed in Italy upon two individuals who died of it, the Pope prohibited it also. From this period, transfusion has been regarded as useless and even dangerous."

I have been quoting from Harper's *Lexicum Medicum*, published in 1839. It is obvious that the viewpoint has changed, but the admonition that transfusion has been regarded as "even dangerous" still applies.

The subject of transfusion reactions was chosen because of the number of instances in which the speaker has noted untoward reactions following the transmission of blood, in the past eleven months. The discussion will deal with these undesirable reactions only, and certain causes thereof will be considered. No time will be taken with technics nor indications of the procedure, as it is assumed that these are well known to the audience and would be boring platitudes.

It has been my lot to give transfusions by the so-called direct method, using whole blood without the addition of any anticoagulant, and pumping it into the recipient by means of the Jube or deBakey instruments. In each method blood was injected into the recipient at the rate of 5 cubic centimeters per stroke unit, and 500 cubic centimeters of blood were given within a matter of twenty to twenty-five minutes. A certain number of reactions occurred. At the University of Minnesota, on the surgical service of Dr. Owen Wangensteen, I gave blood transfusions by the so-called indirect method, with a rate of flow ranging from 60 to 80 drops per minute, and still encountered transfusion reactions. In neither method did the reaction incidence seem more nor less than the other. It appeared that the rate of flow had nothing to do with the occurrence of reactions. Also, the use of hot water bottles around the blood or tubes seemed to have no influence upon whether reaction did or did not occur. What then, granting that the blood was properly typed and cross-matched, was the cause of these unfortunate occurrences? It is this problem that I wish to present for your consideration.

*Sodium Citrate:* Some have pointed to the use of sodium citrate as an anticoagulant, as the cause of transfusion reactions. Sodium citrate forms, with calcium, a complex soluble salt which does not liberate calcium ions. It is felt that this is a *modus operandi* of preventing clotting of the donor blood. Tetany has been observed in man and animals by the intravenous injection of sodium citrate, presumably because of the binding of calcium ions by the excess sodium citrate. The fully developed reactions in such a situation are characterized by generalized tingling sensations, apprehension, dilation of the pupils, carpo-pedal spasm, and occasional cyanosis. The recipient's ionic calcium is progressively changed to the relatively unionized calcium citrate causing signs of calcium deficiency to appear, particularly in certain suscepti-

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ble individuals best typified as hypocalcemic persons. When such reactions, based on actual hypocalcaemia due to citrate, occur, marked relief of symptoms can be obtained by the intravenous administration of calcium chloride or calcium gluconate. It is the general concensus of opinion among research men, however, that citrate reactions are extremely infrequent in adults. Muirhead and Hill do not consider the incidence of citrate reactions significant enough to constitute an objection to the use of whole blood or blood derivatives containing sodium citrate.

*Pyrogens:* These substances are produced in water by the growth of bacteria. As early as 1911 it was pointed out by Wechselman and others that febrile reactions could be caused by contamination of distilled water used in preparing intravenous solutions. These organisms are not destroyed by the ordinary autoclaving technics unless prolonged over seven hours at much higher temperatures than those usually employed. Pyrogens are exceedingly soluable and if present on the surface of apparatus used for transfusion or intravenous procedures, are readily dissolved by water running over these contaminated surfaces. For this reason, it is good practice to wash all tubing, filters, and intravenous apparatus by allowing at least 500 cc. of sterile water, distilled or normal saline, to run through it immediately prior to use. The amount of pyrogen required to produce a reaction is small, and varies with the individual susceptibility of the patient receiving the blood or other fluid. The most common manifestation of pyrogenic contamination is the chill-fever reaction, which may appear within 30 minutes to one hour and may be accompanied by backache, headache, anxiety, apprehension and vomiting. Death has been recorded as due to pyrogenic source.

*Urticarial Reactions:* These are allergic reactions characterized by itching, wheals and edema, and are probably due to factors peculiar to the donor and/or the recipient's bloods. Their incidence is rather rare.

*Overloading the circulation:* This is a definite entity about which it is probably unnecessary to say much, since it is unlikely to occur at the hands of the competent physician or surgeon. Nevertheless hypervolemic manifestations will and do occur where there has been a failure to recognize certain contraindications to blood transfusion. Certainly in the presence of myocardial damage, cardiac failure, constrictive pericarditis and valvular lesions of the great vessels, would demand great caution in performing transfusion, with the possible overloading of the circulation. This situation is, to my mind, about the only condition where the rate of transfusion would appear to be of any significance. The surgical group at Tulane University, under Dr. Alton Ochsner, has been using large amounts of blood in prolonged operations, in debilitated patients. Last year I was actually surprised at the number of transfusions given on the surgical service at Touro Infirmary, some being given blood in operations in which I had seldom ever thought of giving blood, nor had I noted many, if any, of my own colleagues doing so. In spite of the fact that transfusions were used so plentiful, many patients died, and the causes of their deaths were not readily apparent. Many had been given 1000 cc. of blood prior to operation, and during the surgical procedure sufficient blood was given to replace blood-loss and combat operative shock. Dr. Ochsner then decided to do blood-volume determinations, using the Evans-Dye method on all surgical patients, and it was found that many of them had as much as a 30 per cent blood-volume deficit in spite of normal blood counts, normal hematocrit readings, and hemoglobin de-

terminations. Therefore, the blood-volume determination permitted the calculation of what a given individual's blood volume should be, and thus made possible accurate determination of the blood that would be necessary for such individual who came to surgery. With this information at hand, hypervolemic reactions can be avoided, as well as permitting the proper amount of transfusion to proceed. It is my opinion that hypervolemic reactions are more theoretical than actual. Frankly, I have never recognized one, and one of my good friends at the Ochsner Clinic feels that he has never seen this phenomenon in spite of the large numbers of transfusions that are given in that institution.

*Fibrin Embolism:* This has been reported by Mayner, Strumia, and McGraw following the infusion of normal plasma. This they attributed to factors distinctly related to the preparation and administration of the plasma. In certain procedures of preparation, a loss of carbon dioxide incident to dessication may cause the dry plasma to produce an extremely alkaline pH when it is dissolved in distilled water. Such hydrogen ion concentrations may go to 8.5 or 9.0, and a precipitation of protein, presumably fibrinogen, with the formation of fibrin strands or gelatinous spheres, may occur.

Lively reactions, even grave shock, may occur after tranfusion of apparently compatible bloods. In surgery these are not as common as with the internist, and are usually limited to persons with so-called "unstable" blood, and an accelerated sedimentation rate. Certain reactions designated as "colloidoclastic" may be encountered in recipients suffering from hemolytic icterus, anemia of medical origin, cancer, tuberculosis, splenomegaly, purpura, uremia, hepatic affections, and ethylism. Certain donors may be dangerous because of poor digestion or the presence, in their blood, of special agglutinogens. Certain natural agglutinogens are active only below body temperature, while others are active only at body temperature, or 37 degrees centigrade. Therefore the avoidance of reactions in such cases is not due to thermal conditions *per se*, but to the presence of these specific agglutinogens. Hence my doubt of the value of surrounding blood and its tubing by hot water bottles, heat pads or any other warming influence.

R. J. Welsh has pointed out the noxious effects of clots too small to detect, and adds further that hematoma formation due to difficulty of venipuncture of either donor or recipient, may be responsible for hyperpyrexial reactions.

*The Rh Factor:* Recognition of the Rh factor and its rôle in transfusion has become a *sine qua non*. No longer can it be regarded as of importance and interest to the obstetrician alone. Landsteiner in 1940 found that by injecting the blood of Macacus Rhesus monkeys into rabbits, an agglutinin was developed within the serum of the rabbit which would invariably produce clumping and hemolysis of the monkey blood. This antibody, for the sake of simplicity and specificity, was designated as the Rh Factor. It has been found to be present in the blood of approximately 86 per cent of the white population at large. Those having the factor are regarded as Rh positive persons. Certain racial differences exist in that about 90 to 95 per cent of Negroes are Rh positive, and nearly 99 per cent of the Chinese are so factored. The Rh substance is believed to exist on the wall of the erythrocyte or within its substance. It is transmitted according to the Mendelian laws of heredity, the Rh positive being the dominant factor. The two allelic genes, Rh positive and Rh negative, are further classified by subdividing the phrenotype Rh positive into the RHRH

and Rhrh groups. Males of the RHRH group are known to be homozygous, and can father only RHRH infants, whereas males of the Rhrh subgroup are heterozygous and have an even chance of producing Rh positive or Rh negative children. The phrenotype Rh negative produces only Rh negative offspring.

Rh agglutinins are not normally present in the human body, but must be transmitted there, either passively, by transfusion of blood containing them, or generated actively by transfusion with Rh positive blood, causing the recipient to react to the factor in such manner. Finally, the agglutinins are produced by pregnancy in which the fetus is Rh positive. The sensitization of an Rh negative female by transfusion with Rh positive blood is said to produce the most severe forms of erythroblastosis fetalis in case this same female, later in life, becomes pregnant. Since it is believed that the anti-Rh antibody becomes fixed in the tissue cells of the reticuloendothelial system, such immunization is permanent, and may thus be the cause of unfortunate reactions at any future time of life. It is believed by many investigators in this particular phase of hematology that innumerable females have been sensitized to Rh positive blood in infancy, by the practice of intragluteal or intramuscular injection of blood, without knowledge of Rh intelligence that prevailed not so many years ago. I remember many times when, as an intern on the pediatric service of a New Orleans hospital, blood was indiscriminately plopped into the hips of many an unsuspecting infant. I feel sure that many of these were unintentionally rendered Rh sensitive, and I wonder how many of them have since produced an erythroblastotic child.

The response of a person immunized to Rh positive blood is, of course, dependent upon the antigenic potency of the infused cells; and secondly, the degree or ability of the recipient to manufacture immune bodies. Thus, in considering the problem from the standpoint of transfusion only, such an immunized person may tolerate an incompatible Rh blood once, or even twice, but in such instances where a patient may require multiple transfusions over a long period of time, as in hemorrhage from bleeding ulcer, or chronic debilitating disease, sooner or later a severe transfusion reaction is most likely to occur. These reactions may take the form of hemoglobinuria, anuria, or permanent kidney damage. I am thus compelled to say that the determination of the Rh factor is of equal importance as typing and cross-matching blood prior to transfusion, and takes no longer to perform. It is needless to say that since the Rh negative person contains no anti-body in his or her blood, that such person can be used as a donor for an Rh positive individual or Rh negative one.

In conclusion, it is obvious that this paper merely touches the surface of the complex mechanism of blood reactions. In the length of time allotted only the surface of the subject can be scratched. However, my objective has been to bring to your attention some of the commonplace "headaches" of medicine and surgery. There is nothing new that I have said, but if I have not bored you too greatly I am quite satisfied. It has been very flattering to me to be permitted a place on this program and I thank you for your kindness in listening.

I would like to express appreciation to the staff of the Phoebe Putney Hospital of Albany, who so courteously permitted me to review their case records of transfusions. Also to Dr. Leonard Dixon of the Ochsner Clinic, New Orleans, for pertinent comments made and to Mrs. Betty McNabb of the hospital record room for her untiring work of collecting data on transfusions performed in the local hospital.

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## HEALTHGRAM

Even if not more than two-thirds of the cases of erythema nodosum are associated with a tuberculous primary infection, it is obvious that every tuberculin-positive case must be treated in private practice as a possible expression of tuberculosis until thorough examination has shown that this possibility can be ruled out. The best guide to the aetiological diagnosis seems to be the vesicular tuberculin reaction. Hans Jacob Ustvedt, M.D., Tubercle, Dec., 1947.

# CRYPTORCHIDISM

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Cryptorchidism is the term applied to a condition in which the testis does not enter the scrotum owing to maldevelopment, anatomic abnormalities or other causation. It is rare that cryptorchidism produces any symptoms other than the misplacement of the testicle. In cases, however, in which the testicle is in the inguinal canal, under the aponeurosis of the external oblique muscle, or is adherent to the abdominal wall at the iliac crest or under Poupart's ligament, there may be pain on exercise or sudden motion[5].

Cryptorchidism is one of the most frequent anomalies of the genital organs, statistics showing that it occurred in one of every 500 individuals. It may be either unilateral or bilateral, the former occurring 5 to 12 times more frequently than the latter. The arrest of migration may occur at any point along the normal descensus; if within the abdomen it is known as the abdominal or suprainguinal type; if within the inguinal canal, the inguinal type; while if between the subcutaneous inguinal ring and the scrotum, subinguinal type[2]. Abrahamson states that the incidence ranges from 0.2 to 1.02 per cent of the adult male population[12].

## *Embryology*

For a time the early ovary and testes follow an identical course of development and the two organs are structurally indistinguishable. During this indifferent period the primordial sex gland is designated by the noncommital term, gonad. The primitive genital gland makes its appearance in a ridge known as the urogenital fold; this is appropriately named since it contains both the genital and mesonephric primordia. On the ventromedial surface of the urogenital fold the peritoneal epithelium thickens (5 mm. embryos) and rapidly becomes many-layered, so that during the sixth week there is a buldging into the coelom to produce the longitudinal genital fold. The genital fold thus parallels the mesonephric fold but lies mesial to it. With the degeneration of the mesonephros the male appropriates the mesonephric ducts and some of the mesonephric tubules and converts them into sexual canals. The cranial group of the mesonephric tubules (8 to 15) develop in contact with the cords of the rete testis and begin to unite with them in fetuses of three or more months. The lumen becomes continuous by the end of the sixth month and these mesonephric tubules are transformed into the efferent ductules of the epididymis; the latter coil and are known as the lobules of the mesonephric duct coils into the duct of the epididymis; the caudal portion remains straight and, as the ductus deferens and terminal ejaculatory duct, extends from epididymis to urethra. Near its opening into the latter canal the male duct dilates to form the ampulla, from the walls of which is evaginated the sacculated seminal vesicle in fetuses of 13 weeks. In the male the Mullerian ducts (which have developed in the urogenital folds) remain rudimentary. Degeneration of the Mullerian ducts begins with the third month and only the extreme cranial and caudal ends are spared. The cranial vestige is called the appendix testes. The caudal end persists as a tiny pouch on the dorsal wall of the urethra to which has been given the name, prostatic utricle or vagina masculina.

A chorda gubernacule develops within the inguinal fold (which is a development from the genital cord) and crest, and this in turn is continued by way of the ligamentum scroti to the integument of the scrotum. At the beginning of the third month there

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thus exists a continuous ligament, the gubernaculum testis, extending from the caudal end of the testis through the inguinal canal to the scrotal integument, the scrotum having been formed from the genital swellings.

The original position of the testis changes during development. At first it is a slender structure extending caudad from the diaphragm called the genital fold. A foster elongation of the dorsal trunk cephalad, in comparison to the slower growing gonad, produces a relative shift of the latter in a caudal direction. When this process of growth and shifting is complete, the caudal ends of the testes lie at the boundary between abdomen and pelvis. In addition to their early false migration, the testes later leave the abdominal cavity and descend into the scrotum. At the beginning of the third month, while the testes are still fairly high in the abdomen, sac-like pockets appear in each side of the ventral abdominal wall. These are the beginnings of the vaginal sacs, and from the fourth to the end of the sixth fetal month the testes lie near them (at the site of the future abdominal ring) without change of position. Each processus vaginalis evaginates through the ventral, abdominal wall, over the pelvis, then through the inguinal canal and so into the scrotum. During the seventh to ninth months the testes also descend rapidly along the same path. Although the factors involved are not sufficiently understood it is clear that the gubernaculum testis plays an important part. From the caudal pole of each testis the corresponding gubernaculum extends through the inguinal canal to the scrotal wall. During the seventh month the gubernaculum not only ceases growth but actually shortens one-half. The resultant shortening, both relative and actual, serves to draw the testes into the scrotum where they usually are found by the ninth lunar month, or at least before birth. It must be understood that the testes and gubernaculum are covered by peritoneum before the descent begins; consequently the testis follows the gubernaculum along the inguinal canal dorsal to the peritoneum. On reaching the scrotum the testis continues to be covered by a reflected fold of the processus vaginalis but lies entirely outside its cavity. The gubernaculum of a newborn is only one-fourth its length when descensus began; after birth it atrophies almost completely. Within a few weeks to a few months following birth the narrow canal which connects the processus vaginalis with the abdominal cavity becomes solid and its epithelium is resorbed. The vaginal sac, now isolated, represents the tunica vaginalis of the testis. Its visceral layer is closely applied over the protruding testis, where as the parietal layer forms a lining to the scrotal sac; in general the ductus deferens and spermatic vessels and nerves are carried down into the scrotum along with the testes and epididymis. They are surrounded by connective tissue and constitute the spermatic cord. Owing to the path taken by the testes, the ductus deferens loops over the ureter in the pelvis[1].

As the testes descend they pick up tissue layers from the abdominal wall which are the anlage of abdominal muscles and fascia. The scrotal layers are thus from within out; visceral and parietal layers of tunica vaginalis propria of peritoneal origin (between which is the cavity of the tunica vaginalis; tunica vaginalis communis continuous with the transversalis fascia; the cremasteric muscle and fascia from the internal oblique muscle and fascia; intercolumnal fascia from the external oblique; the dartos muscle and skin[2]).

### *Etiology*

One of the theories as to the cause of cryptorchidism is a faulty development or absence of the gubernaculum testis[2]. According to recent endocrinologic investigations, incomplete descent may be due to

one or more of the following causes:

1. Hypopituitarism producing as the term denotes, insufficient anterior pituitary gonadotropic stimulation of the testis (most urologist consider this to be the chief factor[5]).

2. Primary hypogonadism, resulting in insufficient reaction to pituitary stimulation.

3. Hypothryroidism, due to failure of primary tissue differentiation and lack of testicular response.

In contrast to the foregoing type of cryptorchidism, the *ectopic* testis has a normal endocrine stimulus but is arrested or "detoured" by purely mechanical factors and is, therefore, not amenable to hormone therapy. This displacement usually occurs after the organ has passed through the full length of the inguinal canal. It takes place in one of four directions:

1. The superficial inguinal region; there the testis lies lateral to the subcutaneous inguinal ring and in the plane between the aponeurosis of the external oblique muscle and the deep layer of the superficial or Colles' fascia.

2. The pubopenile ectopic (which is very rare) in which the testis rides in front of the pubis at the base of the penis.

3. The femoral ectopic, wherein the testis is found in the region of the femoral or Scarpa's triangle near the saphenous opening.

4. The perineal ectopic, in which the testis lies in a superficial perineal pouch under Colles' fascia producing a swelling anterior to the anus and lateral to the midline.

It should be stressed that the ectopic, unlike the incompletely descended testis, in addition to its normal size is usually accompanied by an indirect inguinal hernia[4].

### *Complications*

The two most important complications are malignant change and atrophy of the testicle. However, torsion, strangulation, chronic inflammation and trauma are more apt to occur with the testicle in its undescended position.

In 1927 Wagensteen wrote, "No greater diversity of opinion probably exists concerning anything in medicine than the question of malignancy in the undescended testicle." The first clear statistical paper was by Campbell in 1942. He showed that:

1. The incidence of malignant change in the testicle is statistically higher in undescended testes than in normally descended testicles.

2. Inguinal nondescent is more frequent than abdominal nondescent. In a series, including children, the incidence of abdominal nondescent constitute about 10 per cent of the total incidence of nondescent; in a series with few or no children, the incidence of abdominal nondescent constitutes about 20 per cent (this is because many of the inguinal cryptorchids descend at puberty).

3. The incidence of malignant growth in the testicle is statistically higher in cases of abdominal nondescent than in cases of inguinal nondescent. One in about twenty abdominal testicles show malignant change. One in about eighty inguinal testicles shows malignant change[2].

Rea made a study of 46 retained testes from patients past puberty with ages ranging from 15 to 73 years. Atrophy, which was progressive with age, was observed in all cases. The atrophy was most marked in abdominal cryptorchids and less so in the inguinal type. Spermatozoa were not seen in any of his specimens. However, spermatogonia were seen in 17; primary spermatocytes in 13; secondary spermatocytes in 8, and spermatids in 3[11].

### *Treatment*

The treatment consists either of hormone therapy or surgery or both. Most authors agree that a course of hormone therapy should be undertaken in patients before puberty. If this is unsuccessful or if the patient is past puberty, surgery should be undertaken at once.

In treating a patient with hormone therapy it must always first be established whether the patient has purely an undescended testis or an ectopic one, hormone therapy being of no avail in the treatment of an ectopic testicle. The following substances have been used in hormonal therapy:

1. The anterior pituitary-like substance which occurs in the urine during pregnancy. It has been scientifically established that anterior pituitary hormone stimulates both testicular hormones, the spermatogenic and the androgenic. The undescended testis, as has been repeatedly shown, is defective in spermatogenic substance.

2. Pregnant mare's serum: according to Londet, the urine of one pregnant mare yields an enormous quantity of hormone, as much as can be obtained from 1,500 women.

3. Extracts of the anterior lobe of the pituitary body proper.

4. Testosterone propionate.

The results obtained with the use of these substances, aside from the defectiveness of the hormone material, depend to a great degree on the anatomic factors; the length of the spermatic vessels of the vas deferens as compared to the length of the inguinal canal through which the testis must pass; the relative size of the testis and tract; normal or abnormal development of the in-

guinal canal and scrotum; adhesions of the testis to contiguous or circumjacent tissues; and abnormalities of the mesorchium[4].

Livermore, in 1945, stated that he was of the opinion that most testicles that descend after the administration of hormones would most probably descend without such treatment as the child approaches puberty. Eisenstaedt and others performed experiments on cryptorchid rats and showed that degenerative changes occurred in the testicle when under hormonal treatment even though the testicle descended normally[5]. W. O. Thompson made a careful study of glandular therapy in 1939 and found that glandular therapy caused the descent only of those testes which would descend at the time of puberty without treatment. However, in 1944, he advocated glandular therapy for the following reasons:

1. Glandular therapy makes it possible to determine at an early age whether or not there is some mechanical obstruction which prevents descent.

2. Glandular therapy facilitates orchiopexy by enlarging the parts involved. He observed that in only one-fourth of the cases in boys under 16 years of age will glandular therapy be effective. Chorionic gonadotropin and testosterone propionate both are effective in the treatment of this condition. The former stimulates the testis to produce male sex hormone, whereas the latter temporarily damages the normal testis. Chorionic gonadotropin should be used in all cases before resorting to substitution therapy. In many cases of bilateral intra-abdominal cryptorchidism, however, the testes are incapable of responding to stimulation. The effective dose of chorionic gonadotropin (according to Thompson) is usually around 500 I. U. three times a week until the testis descends or it is obvious that surgical procedures are necessary. Two months are usually sufficient to determine if treatment is adequate, but it is sometimes necessary to continue as long as six months. Patients must be examined frequently in order to avoid excessive genital growth. If moderate growth occurs without descent, operative procedures should be resorted to immediately since the operation is less difficult if the testis is moderately large[6]. A condition resembling premature puberty can result from excessive hormonal therapy, with overgrowth of the penis, scrotum and prostate[6].

Lapin in 1943 published a paper on results of hormone therapy and came to the conclusion that:

1. A preliminary test of endocrine therapy is fully justified in any cryptorchid testis not clearly ectopic.

2. Chorionic gonadotropin preparations (human pregnancy urine preparations called anterior pituitary-like substances) are the only ones free of theoretical objections. Thyroid has been used on a wrong theoretical basis because hyperthyroid states are often accompanied by atrophy of the testes. Testosterone causes testicular atrophy due to its inhibiting effect on the anterior pituitary. Anterior pituitary extracts are inferior. Some gonadotropins may cause antihormonal responses.

3. The maximal dosage (according to Lapin) is 6,000 I. U. and should be given over a six weeks' period without a rest period (this is considerably under Thompson's dosage).

4. Operation should be done immediately after hormonal therapy if the testes do not descend.

5. The optimal age for treatment is 14 years.

The justification for orchidopexy is based on the following grounds:

1. When the testicle is placed in the scrotum before puberty it produced hormone and sperm. Therefore, surgical treatment is done, perferably before or at the time of puberty.

2. A bilateral cryptorchid is sterile.

3. Malignancy is twice as common in undescended testes.

4. It is more liable to torsion, strangulation, chronic inflammation and trauma.

5. Psychologic influences[4].

There have been many operations devised for the correction of this condition: The Ambredanne operation in which the testicle is brought through the scrotal raphe so that both testicles are in the same compartment of the scrotal sac; a method described by him in which the distal part of the hernial sac is everted over and encloses the testicle and cord and the gubernaculum is sutured to a facial strip on the thigh[7]; The Thorek two-stage operation and the modified Bevan operation which I will describe in more detail.

The Thorek two-stage operation which is a fascial-traction method. The spermatic cord and its structures are visualized through the usual inguinal-scrotal incision. If a hernia is present it is treated in the customary manner by transfixion, high ligation and excision of the sac. The testis is then elevated and the gubernaculum divided between clamps and ligated to permit better mobilization. The vas deferens and its circumjacent structures are then located and a finger is inserted into the retroperitoneal space, as far as possible, in order to liberate adhesions which, if present, may bind the vas deferens and its blood vessels. The deep insertion of the finger into the scrotum assists in the formation of a bed for the testis. An incision is then made in the base of the scrotum. A parallel incision about 1 to 2 inches long is made in the contiguous surface of the corresponding

thigh. The posterior margins of the scrotal and thigh incisions are sutured with everting catgut strands. The testis is brought through the lower scrotal wound by traction on the gubernaculum which is transfixed to the deep fascia of the thigh. The anterior margins of both incisions are then sutured covering the testis. The inguinal incision is then closed without transplanting the cord to avoid undue traction on the testis. The patient remains in the hospital for twelve days. On a return date the scrotum is separated from the thigh, the gubernaculum is dissected from the deep fascia and the scrotal and thigh wounds are separately closed[4].

The Bevan operation is a traction suture method. In the original operation the spermatic vessels were divided. In later modifications only some of the fibers of the cremasteric muscle were cut to allow lengthening of the cord. The modified Bevan is the same as the previously described Thorek operation up until the method of traction and retention is reached. In the Bevan a silkworm gut suture is passed through the lowest part of the scrotal from without in, passed through the gubernaculum near the testis and again passed out through the lower scrotal wall. The testicle is dragged down into the bed prepared for it, and hernial closure completed in the usual way, without transplanting the cord. The silkworm suture is then fastened to an elastic band and this strapped to the thigh above the knee, care being taken to use only moderate tension. This is removed in ten days[6].

Success by the above method was reported as 91 per cent by Ormond as against 52.6 per cent success by a method without the traction suture. He believes that surgical treatment should not be instituted until puberty since a large number spontaneously descend at that time. Wm. W. Johnson's (J.A.M.A. 113:P.25, 1939) statistics show that out of 300 he watched descended, 206 came down between the ages of 11 and 14.

*Prognosis*

The prognosis is usually good in the case seen in early childhood. The difficulty of placing the testicle in the scrotum and atrophy of the testicle are enhanced every year after puberty. Livermore reported no cases of spermatogenesis in testicles placed in the scrotum after 21 years of age, although excellent cosmetic results were obtained. Lowsley and Kerwin reported similar findings[5].

*Summary*

1. Diagnose the condition early and, if possible, differentiate this condition from ectopic testis.

2. Start treatment early, at least by the time of puberty.

3. Institute a course of hormone therapy before puberty, if possible, using chorionic gonadotropin 400-500 I.U. 2 to 3 times a week for 2 to 6 months, carefully watching for excessive genital growth.

4. Operate if descent does not occur at least by the time of puberty.

5. Best results have been obtained by traction methods of orchidopexy.

6. Follow-up cases to see if testis retracts.

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# ALOPECIA AREATA AS A CONVERSION SYMPTOM

ROBERT E. PECK, M.D.
*Atlanta*

Some authorities consider alopecia areata related to emotional disorders. Sutton states that the cause is not known but that "nervous conditions are connected in some way." He observed the onset of this condition with death in the family, business failure, getting married, or getting divorced. Rogers (1929) reported a man whose alopecia areata recurred every time his wife had a child[1]. Pusey reported a case of alopecia after emotional shock[2]. On the other hand, Becker and Obermayer state that the incidence of nervous shock is rare in alopecia[3]. In this type of statement one is inclined to doubt that all cases have been properly studied to rule out emotional factors in their origins, as not all emotional conflicts are readily seen during the ordinary interview. Joelsohn, Stern, Reenstirna, Puley, and Spiegler all have reported cases of alopecia areata occurring in soldiers after psychic trauma similar to three of the four in this report[4].

The following cases show alopecia areata occurring in the initial symptoms of a generalized neurosis:

## REPORTS OF CASES

CASE 1: A 32 year-old white female, married, with a small son. Her neurosis began with the sudden development of claustrophobia and a phobia of becoming nauseated in public. Shortly after this, while combing her hair, she noticed a patch of hair coming out. It was confirmed at a beauty parlor that a small patch of hair one and a half inches in diameter had completely fallen out. She was told by her physician that it was nothing to worry about, and as she was able to cover the patch with hair it caused her no difficulty. She was treated by psychotherapeutic interviews and her neurotic symptoms cleared up. The exact significance, if any, of the alopecia never was clarified during the study, although she had what is probably a related symptom—a fear of having her hair handled or cut by a barber.

CASE 2: Was a 37 year old white male with a markedly emotionally unstable nature. He was a high school teacher by profession, had a large family. He had many neurotic fears and mannerisms. He joined the army because of feelings of guilt at not being in the service, but did poorly in the army and was constantly sick. He was sent to North Africa after the close of the Tunisian campaign. While in Oran during an air raid he was extremely frightened and ran frantically around the court of the hotel where he was quartered. One of his fellow soldiers made a whistling noise as if a bomb was dropping and he fainted with fear, falling and hitting his head against a column. Several days later, while getting his hair cut, the barber discovered that a circumscribed area on the part of his head which had hit the column had become completely bald. The alopecia appeared to be a conversion symptom, although nerve injury may have been a factor. It was necessary to finally reclassify this soldier to limited duty because of his inability to face the anxiety inherent in going into combat and because of the rapid succession of psychosomatic symptoms which occurred in him.

CASE 3: A stable, 25 year old white soldier. There was no preceding history of maladjustment. While at Anzio he was quartered in the basement of a building which was hit by a high explosive shell. However, the shell did not explode but passed through the house and entered the basement where he was sitting, rolled and skidded along the floor, hitting the wall opposite him and stopping. He was paralyzed with fright because of the incident, and the next morning noticed that his hair had fallen out in patches over his entire head. Traumatic anxiety symptoms developed at the same time and he was hospitalized.

CASE 4: A feeble-minded 19 year old white soldier with a long history of maladjustment. On his way to combat as an infantry replacement his hair began falling out in patches. He continued, however, and managed to remain at the front for three weeks before he was finally returned to the hospital because of his alopecia. At the hospital he was found to have the symptoms and signs of a well established anxiety neurosis.

## *Summary*

In these cases alopecia areata appears as one symptom in the opening phases of a neurosis. Two of these (2 and 3) were associated with sudden and overwhelming fright. In 1 and 4 they were associated with the onset of chronic anxiety. In 2 the mechanism seems clearly that of a conversion symptom. This same mechanism may be postulated in the other three, as conversion symptoms are frequently seen in the ordinary traumatic anxiety neurosis and anxiety hysteria.

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## HEALTHGRAM

If the head of the family is stricken with tuberculosis the family's resources are exhausted in about one year. After the society takes care of the victim and his dependent children, and after his death gives his widow a pension. The expenditure in taking care of the results of the disease far exceed the money spent for its eradication. James H. Hutton, M.D., Illinois M. J., April, 1947.

# X-HAY FEVER OF THE SOUTH

Mervin B. Wine, M. D.
*Thomasville*

I should like to consider with you for a short period a common entity called, X-Hay Fever. It is the purpose of this paper to familiarize some of you with this very important problem and I might add that I have nothing new to contribute and merely wish to point out this syndrome as being an important problem in the field of allergy.

It has been estimated by Weil and Wodehouse[1] that between 40 and 50 per cent of the cases of summer hay fever of the South remain unexplained. We have come to recognize this type of hay fever as a definite clinical entity peculiar to the South, caused by an unknown factor or factors and recently labeled as being X-Hay Fever. The symptoms of x-hay fever are the same as those caused by some type of inhalant and having a specific season; namely, May until late September or early October. Most of these patients state that their symptoms are worse at night and in the early morning, and some are relieved by air-conditioning—others are made worse by this procedure.

The geographic distribution of x-hay fever, according to Wodehouse[2], includes South Carolina, the southern two-thirds of Georgia and Alabama, Northern Florida, the west tip of Tennessee, Mississippi, Louisiana and Southeastern Texas.

To define this term, "X-Hay Fever", it is meant those patients who suffer from hay fever or asthma, which occurs between the months of May to October and who are skin negative by scratch, intradermal and passive transfer technics. These patients are relieved by going to the mountains or to the seacoast. A distance of 350 miles from the gulf renders the victim asymptomatic.

The problem of x-hay fever is so important that a committee of allergists has been formed by Dr. Ralph Bowen (1941) and Dr. B. G. Efron. This committee has studied grass smut, pollens, airborne fungus spores, and insect emanations, but testing with extracts of 17 different insects proved to be nonspecific and futile. In 1943 the committee[3] confined its work to fungus spores and had some promising results, but nothing definite has yet been discovered. Logically, one allergist reasoned that the season of x-hay fever corresponds closely with that of grass hay fever and so treated a number of cases, but his results were negative.

How does one handle these cases?

1. They should be completely skin tested to rule out common pollens and inhalants. Skin testing should be done both by scratch and intradermal technics as indicated.

2. Once a diagnosis of x-hay fever has been established, i.e., by history, physical examination, and negative skin tests, one of several things may be done:

(a) Send the patient to a hay fever resort; namely, mountain resorts and/or Dr. Efron lists Savannah, Brunswick and Jacksonville beaches, Panama City, Biloxi, Pass Christian and Galveston as having a high degree of immunity for x-hay fever.

(b) Some patients are not financially able to stop work and simply move away for 5 or 6 months, therefore must be treated symptomatically. Some patients I have seen with x-hay fever were treated last year with benadryl with moderate relief. It will be interesting to see the results of pyribenzamine hydrochloride therapy this coming season, inasmuch as it is said to be a more efficient drug.

In summary, I wish to emphasize the existence of x-hay fever and its prevalence which amounts to about 40 to 50 per cent

Read before the Second District Medical Society, Bainbridge, April 10, 1947.

of all summer hay fever and asthma in this part of the State. It is definitely seasonal, acts like pollen hay fever, but its cause is as yet undetermined. The average population is roughly 10 per cent allergic; that is, one person in ten will be allergic and out of that 10 per cent, 4 to 5 per cent, will have hay fever or asthma which cannot at present be explained.

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## PRESENTATION OF THE PRESIDENT'S GOLD KEY TO STEVE PASCHAL KENYON, M.D.

J. C. PATTERSON, M.D.
*Cuthbert*

We have a happy custom in the Medical Association of Georgia. For many years, at each annual meeting of the Association, we have presented the retiring President a gold key in recognition of his services to the public, and to the medical profession of this State. I feel highly honored to have been chosen to present this key to my very close friend tonight.

For over a quarter of a century Steve Kenyon has been my friend and neighbor; many are the happy hours I have spent with him in his home, in my home, on the golf links, and on fishing and hunting trips. I have even tried my luck with him at the card table, but always I came away from these experiences a poorer but wiser man.

In every walk of life great physicians have left their mark in service to mankind: Luke, the great physician; our Lyman Hall, a physician and a signer of the Declaration of Independence; Oliver Wendell Holmes, better known in literature for his "Autocrat of the Breakfast Table" than as a physician; Leonard Wood, physician and great soldier and statesman; William C. Gorgas, the great physician and sanitarian whose work in the control of the spread of yellow fever made possible the building of the Panama Canal; Lister, Pasteur, Banting and Best, the Mayos, Osler, Fleming—all of these and more have been the benefactors of man, and are our medical heroes.

But if we, as a profession, were to send an ambassador to the Court of Saint Peter to gain us admission through the Pearly Gates, or to justify our existence as a profession, we undoubtedly would choose a general practitioner of medicine, and preferably one from a small town, as he would more nearly represent the heart and soul and conscience of medicine. He would best understand humanity, with all of its joys, sorrows, tragedies and triumphs. Having lived with ordinary man as a citizen, as a neighbor, as a friend and as a physician, our retiring President is ideally suited for such an ambassador.

As a citizen, with a beautiful and gracious wife and two lovely daughters to help him, he has been a leader in every worthwhile endeavor in his community; he has served as alderman for the City of Dawson, as chairman of the school board for Dawson's public schools, as commander of the Davis-Daniel Post of the American Legion, as president of the Rotary Club of Dawson, as chairman of the Terrell County Department of Health, as director of the Bank of Dawson, and as deacon of the First Baptist Church of Dawson. In addition, he has participated in the affairs of the Masons, the Knight Templars and the Shriners. Finally, to make his citizen classification complete in every way, he is a grower of American Beauty Roses.

As a friend, he is wholeheartedly with you—right or wrong—and always is a charming companion.

As a neighbor, he is generous and kind.

As a physician, he excels in his community. He has the utmost confidence of

his patients; in his quiet, dignified manner, he demands and receives respect. He is the true physician who not only treats the present ills of his people but teaches them how to live healthier and happier lives. His code of professional ethics has been the Golden Rule and a benediction, a fine example to the young men of our profession.

His professional life has been one of untiring service to his people, and to organized medicine. A member of the Terrell County Medical Society, he was elected president of that organization early in his medical career. Later he was elected president of the Third District Medical Society. Still later he was elected a member of the Council of the Medical Association of Georgia, and for some time served as chairman of that body. In 1939 he was appointed by the Governor of Georgia to membership on the Georgia Board of Medical Examiners. Two years ago, at the Macon Session of this Association, he was elected President-elect of the Medical Association of Georgia. Last year, at the Augusta session of the Association, he assumed his duties as President. To this position he has given unstintingly of his time and effort. He has been a leader in the movement to establish more hospitals and to get doctors back into small communities, and in reorganizing and bringing medical affairs back under control of the medical profession.

Dr. Kenyon, we are grateful for your efforts in behalf of the people of Georgia, including the members of this Association. As a token of our appreciation it gives me great pleasure to present you, on behalf of the members of the Association, this gold key of service, with our love and esteem. May you wear it in the knowledge that it represents a job well done.

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**The Medical Association of Georgia centennial session will be held at the Hotel DeSoto, Savannah, May 10-13, 1949.**

## ABDOMINAL SURGERY IN INFANTS

In a report presented at the recent Michigan Postgraduate Clinical Institute, held for doctors of medicine throughout the state, a noted surgeon who specializes in operations on young children gave a most encouraging picture of the outlook for young surgery patients today.

The report made clear that during the past fifteen years, great progress has been made in the major field of abdominal surgery on children, with a corresponding reduction of ill effects, such as infection, or fatalities.

This marked improvement is attributed to four major factors. One, earlier and more accurate diagnosis has become possible. Another important factor is the development of a better understanding of the fluid replacement and requirement of these young patients. Right along with this specialized technical knowledge has come an improvement in the refinements of surgical technique for children. The fourth boon in this field, as in many others, has been the use of those great healing agents, the sulfa drugs, penicillin and streptomycin.

Besides these four specific advances in the surgery itself, the reporting surgeon also mentioned the importance of having especially trained personnel in handling youngsters receiving operations. He pointed out that anesthesia is a special problem in children, for instance, and should be handled by one trained or experienced in that particular branch. Likewise it takes special training to be capable of supplying intravenous fluids, blood, and plasma to a new-born when needed.

In general, this surgeon maintained, much of the improved results in infant surgery can also be credited to the interest and cooperation of the pediatricians—those doctors of medicine especially trained to handle and treat young children.

## VETERANS' TRAINING

One in every 25 World War II veterans training under under the G.I. Bill is preparing for a career in medicine or in a related field, a Veterans Administration survey revealed.

On December 1, 1947—date of the survey—101,447 ex-servicemen and women were enrolled in educational institutions and were training on-the-job for medical positions and professions ranging from laboratory technicians to surgeons.

More than 40 per cent, or 43,558 were studying medicine. Of these, 18,265 were in pre-medical training, and 25,293 were enrolled in medical schools.

A total of 17,486 were in dentistry. Of these, 7,244 were taking pre-dental training; 7,314 were in dental schools; 2,600 were studying dental mechanics; and 328 were training to be dental hygienists.

Veterans training to become pharmacists numbered 13,245. All but 890 were in schools of pharmacy. The 890 were training on-the-job in pharmacies.

A total of 5,194 were training to become laboratory technicians and assistants. About two-thirds, or 3,628, were training on-the-joh, and the remaining 1,566 were enrolled in school courses.

Of the remaining veteran-trainees, 6,835 were studying optometry; 4,459, nursing; 3,463, chiropractic; 1,789, veterinary medicine; 1,166, pre-veterinary medicine; 1,145, chiropody; 712, osteopathy; 357, physical therapy; 591, public health medicine; and 1,066, other types of medical services.

The VA survey lists occupational fields of some 2,000,000 veterans studving in schools and colleges, and 546,000 training on-the-job.

Veterans are eligible for education and training under the Servicemen's Readjustment Act (G.I.Bill) if they served in the armed forces between September 16, 1940 and July 25, 1947; had 90 days or more of active service, and were released under conditions other than dishonorable.

The 90-day minimum service requirement is waived in the case of veterans released because of service-connected disahilities.

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## PHYSICAL MEDICINE USED SUCCESSFULLY IN PARALYSIS

Marked success in the treatment of hemiplegia through the use of physical medicine is reported by Comdr. Edward W. Lowman (MC), U.S.N., of the Department of Physical Medicine, U. S. Naval Hospital, Philadelphia.

Physical medicine includes the employment of the physical and other effective properties of ultraviolet and infra-red rays, the use of heat, cold, water, electricity, massage, manipulation, exercise and mechanical devices for diagnosis and treatment of disease.

Writing in the May 29 issue of *The Journal of the American Medical Association*, Comdr. Lowman reports that out of 13 chronic cases of paralysis due to brain hemorrhage, 12 learned to walk again after undergoing an intense program of physical medicine for 118 days, while three showed definite improvement. There was no improvement in the condition of the remaining three.

In 10 additional new cases, nine of the patients learned to walk again after 67 days of treatment, and improvement was noted in the other patient.

Commenting on the results of the treatment, Comdr. Lowman says that "the early, intensive and intelligent use of physical medicine, with emphasis on therapeutic reconditioning exercises, assures a potentially good prognosis in the rehabilitation of patients with uncomplicated hemiplegia."

The program of rehabilitation employed by the Navy doctor was begun from two to four weeks after the onset of the acute illness.

The first stages included massage, application of heat and therapeutic baths, followed by active exercises in bed when voluntary motion was possible.

Efforts to learn to walk again were begun early, usually within two to eight weeks after treatment was started. This was a gradual process, beginning with sitting up in bed and placing the feet on the floor from the bedside, and concluding with exercises in the gymnasium.

The gymnastics program, which was conducted under the supervision of a trained physical therapist, consisted at first of simple mat exercises and ultimately of more difficult ones on bars, stationary bicycles and other devices.

This program varied somewhat for each patient, depending on his physical and mental condition.

According to Comdr. Lowman, the greatest factor in the success of the rehabilitation treatment is "cooperation on the part of the patient, fostered by his desire to regain his independence."

## SURGERY HELPFUL IN EARLY LUNG CANCER

Patients suffering with cancer of the lung have a good chance of recovering if the malady is diagnosed early enough to be treated by surgery, Edward D. Churchill, M.D., of Boston, reports in the May 29 issue of *The Journal of the American Medical Association*.

"The constructive results of surgical extirpation are favorable when compared with other visceral malignant tumors, and, more important, steady improvement is being recorded," according to Dr. Churchill, who adds that one or two out of every lung cancer can be treated surgically.

Discussing the operative mortality rate of the disease, he says that this has been steadily reduced as technical problems were solved and more favorable stages of the disease recognized.

Much progress is also being made in the diagnosis of lung cancer, the Boston physician reports, adding that "there are many reasons to believe that the time lag between onset and recognition will be still further reduced."

Cancer of the lung is almost as common as cancer of the stomach. Its greatest incidence is in men (80 to 85 per cent of all cases) between the ages of 40 and 70.

Dr. Churchill says nothing is known about the cause of the disease that can be translated into effective preventive measures.

In contrast to the suggestion by some investigators that there is a relationship between cigarette smoking and lung cancer, he says that "a careful recording of the smoking habits of patients with the disease provides no factual evidence on which advice to give up smoking can be based."

Since so little is known about the cause of cancer, physicians must at present depend upon early detection, rather than prevention, as a means of elimination of the disease. According to Dr. Churchill, the responsibility for early diagnosis of lung cancer rests not only with the general practitioner, but with all physicians regardless of their specialty.

In this connection, he cautions that the early signs of lung cancer may be so commonplace that they may not be taken seriously by either the patient or his physician.

Among the commoner symptoms of the disease is a cough which "hangs on" in an unaccustomed manner. This is the first symptom in over half of all lung cancer cases, and is a common manifestation sooner or later in 90 per cent of all cases.

Other symptoms include blood in the sputum, occuring in 40 to 50 per cent of all cases, loss of weight, pain in the chest, wheezing and swelling of the fingers and toes.

X-ray screening is considered the only practical way for the physician to detect lung cancer

in the apparently well population, since this method discloses growths which may be present on the outside parts of the lung. According to the report, the increased use of x-ray screening for tuberculosis as a public health measure is bringing a few of these asymptomatic cases to light.

## HALF OF ALL AMERICANS HAVE ATHLETE'S FOOT

Half of the American people are infected with athlete's foot and at least half of all school children will show some form of the affliction during the school year, according to G. T. Stafford, Ed.D., and C. O. Jackson, Ed.D., of the Department of Physical Education, University of Illinois, Champaign.

Writing in the current issue of *Hygeia*, the health magazine of the American Medical Association, they say:

"Most individuals, especially adults, have had athlete's foot infection a number of times. The great majority of cases will be mild, yet capable of leaving causative spores on floors and premises."

Referring to their figure on the number of persons afflicted with the infection, the writers say that it is "substantiated by the records of medical examinations for induction into the armed forces or for admission to colleges and universities."

Athlete's foot, the article says, is usually more irritating and painful than dangerous. It is produced from spores, or seeds, of a certain fungus and as such, spreads rapidly, especially in damp, dark places.

According to Drs. Stafford and Jackson, the fungi causing the disease are usually found in three places: locker rooms, shower rooms and dressing rooms; shoes, garters, fabric equipment and towels, and on the human body.

The use of footbaths containing so-called fungus-killing preparations or "fungicides" is ineffective as a means of eliminating the infection, the article says. This is because footbaths do not remove the disease-producing spores from floors, shoes and other carriers and because they do not permit sufficient contact with the fungicide to kill the spores.

Several positive measures are suggested by the authors for the elimination of athlete's foot. The floors and premises of places likely to be contaminated should be scrubbed and treated with a good fungicide at least once a week. Such a procedure either removes or destroys the causative fungi.

An effective powder to combat infection from contact with shoes and hose should be available to all school children. The powder should have the property of forming a film in the shoes and on the body, thus gaining the necessary penetrability when dissolved by body moisture or prespiration.

For killing the fungi on the body, the article recommends the use of non-irritating, liquid germicides and fungicides if administered with the consent and under the direction of a physician.

Schools which have followed an adequate control program for athlete's foot have noticeably reduced the incidence of the disease, the article says, adding that the infection, with proper care and patience, can be eliminated.

## SCURVY AND RICKETS STILL PRESENT, JOURNAL EDITORIAL SAYS

Despite major advances in the field of nutrition, scurvy and rickets still beset many children today, according to an editorial in the May 8 issue of *The Journal of the American Medical Association.*

The editorial says:

"The clinical application of fundamental principles of nutrition is not abreast of increasing knowledge of nutrition. Infants with rickets or scurvy still appear frequently in the pediatric clinics of many of our teaching institutions. Recently a relatively small pediatric service admitted three infants with frank scurvy in as many months.

"The gratitude of the teaching staffs for such teaching material is exceeded only by the embarrassment of rationalizing the occurrence of such cases to the medical student.

"From his earliest days in medical school, the modern student has been taught that prophylactic administration of vitamins C and D should reduce scurvy and rickets to obsolescence.

"Association of scurvy with poverty, malnutrition and lack of medical care is no longer entirely valid. Many recent cases have arisen in families of moderate economic circumstances and have demonstrated optimal gains in length and weight.

"Usually patients have been observed at regular intervals by physicians. Factors other than parental ignorance or economic circumstances must be at fault.

"Almost uniformly these infants have been fed on proprietary preparations which are often represented as 'complete infant foods.'

"Indeed, the rapid gains in length and weight testify to the completeness of these foods—with the exception of vitamins. Because growth is occurring rapidly during infancy, requirements for vitamins must be fully satisfied; growth will cease if these demands are not met.

"As these preparations are usually fed under the direction of a physician, he must assume the responsibility of ascertaining specifically the vitamin content of these preparations in relation to the specific needs of the patient, regardless of the claims of the manufacturer concerning the completeness of the food.

"Reliance on such preparations for appropriate intake of vitamins is unwise since quantities of the product fed from day to day from patient to patient are highly variable.

"Oliver Wendell Holmes said,, 'A pair of substantial mammary glands have the advantage over the two hemispheres of the most learned professor's brain in the art of compounding a nutritive

fluid for infants.

"Perhaps in these days when hypofunction of the postpartum breast is a national phenomenon, refuge in the cerebral hemispheres of the learned physician is necessary. Fortified with adequate knowledge of nutrition, he can eliminate scurvy and rickets from the American scene."

## MARRIED WOMEN AND SCIENCE DON'T MIX, HYGEIA ARTICLE SAYS

Married women scientists who run homes and have children are poor workers, bad wives and mothers, or both, according to an article appearing in the current issue of *Hygeia*, the Health Magazine of the American Medical Association.

The article, entitled "Married Women and Scientific Investigation," was written by Mrs. Olive Lewis, who lives with her scientist husband in Buenos Aires, Argentina.

Scientific research, the writer points out, is an all-absorbing vocation, requiring total concentration, arduous training and the living of a simple, modest life.

Women are capable of undergoing the sacrifices required for a scientific life as men, Mrs. Lewis says, but she questions first of all whether they should sublimate their entire lives to their careers.

"One of the most important functions of men and women is the continuation of the species," the article states, "and though to some women it seems unfair and irksome, it cannot be denied that the mother is more important in the matter.

"If a woman feels that she does not wish to contribute her part towards the continuance of the race," the writer continues, "then there is no more to be said—she is as free as any man to embark on the career of a scientific worker, and possibly by the fruits of her work will be sufficient reward for the sacrifice of her potential maternity."

Childbearing, Mrs. Lewis says, is a definite strain on any woman, making it impossible for her to concentrate exclusively on her work when she is constantly made conscious of her physical condition.

In addition, she says, the age when woman should start her childbearing is between 20 and 25, just the time which should be devoted to the intensive training which scientific work demands.

Even if these obstacles are in some way overcome, Mrs. Lewis argues that the woman scientist who is as interested in her work as she should be will not be able to interrupt it to occupy herself with the functions of bringing up children and homemaking.

Citing the case of the Curies, who worked together as husband and wife and yet produced a famous daughter, Mrs. Lewis calls this an exception to the rule. Pierre and Marie Curie, she says, were extraordinary in many ways, "able to do without the usual amenities applied to the word home."

Summing up her case, the writer cautions that it is not her purpose "to deny the fact that women can be capable and useful scientific investigators," but to suggest "that the urge to continue the species is naturally stronger in most women than the urge to engage in disinterested research."

"As long as human society is founded on the family, the married woman is more necessary in the home than in the laboratory," she concludes.

## HYGEIA ARTICLE WARNS OF DANGEROUS WAR TROPHIES

Deadly weapons of World War II are still killing and maiming people every day in the United States, a Treasury Department investigator warns in an article appearing in the current issue of *Hygeia*, the health magazine of the American Medical Association.

The author of the article, Robert S. Krause, Detroit, says that many of the land mines, hand grenades, unexploded shells and firearms which were carried home by American soldiers as souvenirs of the war are responsible for these unnecessary and untimely deaths.

Pointing out that American soldiers, sailors and marines have always been avid souvenir hunters, Krause states that they outdid themselves in World War II, bringing home hundreds of thousands of dangerous war weapons. Of these, he says, the majority were pistols or revolvers, although there were many machine guns, submachine guns, machine pistols, carbines, mortar shells, artillery shells, land mines, hand grenades and small aerial bombs.

Without realizing it, many of the possessors of battlefield souvenirs may be violating the National Firearms Act of 1934, which requires any person owning a firearm as defined by the law to register it with the Bureau of Internal Revenue.

The law also requires that any persons wishing to acquire certain types of firearms must submit an application containing his photograph, fingerprints and other data, and to keep with the weapon a copy of the application bearing the $200 tax stamp.

The author notes that in order to combat the high death and accident toll resulting from accidents with dangerous war trophies, several agencies, both private and governmental, have inaugurated a nation-wide safety campaign.

The program urges owners of pistols, revolvers, ordinary rifles and shotguns to have them examined by experts to see if they are safe to fire. Owners are cautioned to keep firearms away from children and thoughtless adults and are warned of the danger of having activated explosive trophies, such as grenades, mines and bombs around the house.

The author points out that the National War Safety Trophies Committee, which was formed by the National Rifle Association, the Treasury Department, the Army and the Navy, offers to pick up dangerous weapons, have them unloaded or deactivated by experts and return them to their owners.

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

### AUXILIARY NEWS

A luncheon honoring Mrs. E. A. Allen and Mrs. M. T. Edgerton, president of the Fulton County Medical Society Auxiliary, both of Atlanta, was given by Mrs. Shannon Mays, president of the Bibb County Medical Society Auxiliary. Following the meeting they were honor guests at a tea at which Mesdames Mass, Siegel, Goodman, Hall, Applewhite, Chrisman and Rogers were hostesses.

* * *

Fulton County Medical Society Auxiliary is redecorating its meeting room and lounge in the Academy of Medicine. The House and Grounds Committee, composed of Mrs. Olin Cofer, Mrs. Frank Boland, and Mrs. O. H. Matthews has charge of this program. These ladies have given invaluable help to the doctors in modernizing the kitchen and dining room. New steam tables, stoves, sinks, cupboards and refrigerators have been installed and will enable the Auxiliary to serve dinners to 500 persons.

Book reviews have been given by different members for the monthly program. Mrs. Joseph Massee gave a thorough and charming review of the "Life of the Mayo Brothers;" Mrs. Kells Boland read a very discerning paper on the "Life of Abraham Flexner" which gave the history of medical colleges and hospitals in this country. Mrs. Allen Bunce gave an excellent report on "As I Remember Him," a biography of Dr. Hans Zinsser. Mrs. W. L. Curtis gave a delightful review on "The Life of Dr. William Henry Welch." Mrs. Osler Abbott reviewed the "Life of Sir William Osler."

* * *

At the meeting of the Tift County Medical Society Auxiliary, Mrs. R. K. Winston, president, told of the continuation of the informative radio talks on health problems. In the new series of programs Lionel Barrymore acts as narrator and numerous actors and actresses take part in the tuberculosis program entitled "The Constant Invader." These 15-minute plays can be heard over WWGS each Wednesday and Friday nights at 8:30 o'clock. Mrs. R. E. Jones reported that the auxiliary had donated $70 for the tuberculosis-venereal disease survey which will be made in Tift County in the early summer.

Announcement was made by Mrs. Carl S. Pittman, Jr., district chairman, that the Second District Medical Auxiliary meeting will be held in Albany.

The annual dinner for the doctors was given on Doctors' Day. Mrs. N. Peterson gave a very interesting talk on the Jane Todd Crawford Memorial, and Mrs. C. S. Pittman, Sr., discussed health legislation and pre-payment medical care plans.

Mrs. Clifton G. Kemper

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## MALARIA ERADICATION IN GEORGIA

The reduction of malaria in Georgia over the past three decades serves as a milestone of accomplishment in the field of public health. It is perhaps more impressive than any other demonstration of disease control made possible by advancement of science in relation to cause and prevention. The history of malaria in Georgia reads more like fiction than fact.

It is natural then that people should be interested and concerned and ask "What has happened to malaria?" and "What are the factors or the chief factors involved, and has it gone just as other mosquito-borne diseases such as yellow fever and dengue?" These are difficult questions to answer. Evasively we may say "It is gone with the wind." But with what wind and how and when? However, we should be concerned with the possibility of a change of the course of the wind blowing back in fury the embers not yet completely extinguished. These are some of the questions challenging the scientist, the physician, the engineer and sanitarian, and others engaged in public health.

Let us not be convinced that some peculiar phenomenon has brought about this change though some advance this hypothesis. If such should be the case then evidently malaria is exceptional in this respect. Generally speaking, diseases do not just disappear without the influence of human effort and there are very few public health problems which have received as much human effort as malaria.

From the time Oglethorpe established a colony in Georgia, which was in 1733, history is replete with widespread malaria epidemics in Georgia. It is stated that in the City of Savannah in the year 1854 in a period of three months there were 445 deaths from malaria and 595 from yellow fever. I quote from Dr. Luther B. Grandy in the History of Medicine and Surgery in Georgia, "Bilious remittent fever, so-called, existed side-by-side with defined cases of yellow fever. They were often confounded. The former followed the course of western migration and made its first appearance in the interior of the State, and in the country around Milledgeville about the year 1807. The Indians had just vacated this territory and left it to the white men. The latter immediately cut down the forests and opened up the soil. Dr. Tomlinson Fort, who came there to practice medicine stated, Bilious fever appeared as suddenly as the face of nature was changed by the hand of man. For eighteen years it was a formidable epidemic. No tables of mortality were kept but I cannot be mistaken in placing the deaths from bilious fever alone as five per cent of the whole population in each year from 1808 to 1813. This disease happening in a few months each year gave the disease the terror of pestilence." Many other similar conditions in various southern portions of the State are recorded but too voluminous to be quoted here.

Then let us pause to think of the great sacrifice of education, commerce, industry, agriculture and manufacturing during these periods. How many of our State's seaports might have rivaled the larger seaports farther north on the Atlantic Coast? I am sure that we should feel gratified that this disease seems to be on the way out.

It is an indisputable fact that during these periods of extreme epidemicity neither cause nor prevention was known. Science had not yet advanced knowledge of the definitive cause and was hampered by the then prevalent concept that malaria was caused by the noxious effluvia of the air, better known as miasmata. Naturally it was assumed that science had no control over atmospheric phenomena. It was not until the year 1897 that Sir Ronald Ross offered convincing observations on the development of malaria parasites in the mosquito. Further observations and developments relative to contact between man and mosquito cast the necessary light upon the agent and vector to enable the institution of preventative measures.

Scientific studies and research are necessarily slow as well as development of practical application. It was at least two decades before practical control measures became general in Georgia. In the year 1919 the results, following a rather lengthy survey by the United States Public Health Service in cooperation with the State Board of Health, were completed and presented. One result of this survey showed that in one Georgia county approximately 82 per cent of the people had estivo-autumnal malaria infection. Also some physicians' records showed that 75 per cent or more of their practice was for malaria. Records show that in 1920 nine malaria surveys and investigations were made in Georgia cities resulting in definite drainage projects for malaria control. At this time both urban and rural malaria was exceedingly prevalent. Space here will not permit to chronologically report the annual expanding program of drainage, especially in those portions of the State where malaria was most prevalent. Even State and county convict labor was pressed into service. By the year 1930 there were at least twenty-five counties using convicts and machinery for malaria drainage. Drainage for malaria consists principally of draining ponds which were productive of malaria mosquitoes. During the period from 1931 to 1935 inclusive there

was a total of 8,589 such areas drained. During this latter period there occurred the serious economic depression, which led to establishment of the W.P.A. (Works Progress Administration), the purpose of which was to provide payrolls for relief labor. Thousands of men in Georgia on these payrolls were assigned to malaria drainage. The report for the year 1935 shows the number of man hours for malaria drainage as 6,414,000. It is estimated that during the entire emergency relief program a total of $10,000,000 was spent for malaria drainage.

The next changing period of malaria control was with the mobilization of troops prior to World War II. In 1942 for the protection of military personnel there was organized by the United States Public Health Service an agency designated as M.C.W.A. (Malaria Control in War Areas). This agency furnished personnel, materials and equipment to the State Health Department for whatever purpose needed. The program initiated was for larviciding and minor drainage within and contiguous to army cantonments and industries for war purposes. These operations covered a large portion of the State where malaria had previously been prevalent.

With the end of hostilities and demobilization of troops malaria control method underwent another change in 1945. The danger was recognized of our troops returning home with malaria infection acquired in foreign countries where malaria was endemic. Preparation for this was made possible by release from the Army of the new insecticide known as D.D.T. Personnel, materials and equipment were provided for spraying homes in a selected group of counties. This program was designated as the Extended Malaria Program. This program is still in effect with the spraying of homes in the State selected because of previously high malaria rate.

This general outline has been given in an attempt to answer the question in the second paragraph of this discussion relative to the factors involved in the phenomenal reduction of malaria in Georgia. Thus it may be seen that malaria control has been practiced over a period of thirty years in Georgia. Therefore, it seems logical to assume and to claim that a thirty-year control program is shifting from a control program into realization of malaria eradication.

It has been brought out in this report that from 1931 to 1935 there were a total of 8,589 malaria mosquito producing areas eliminated with the greatest accomplishments reached in 1935. From 1936 to 1946 the records show a reduction each year in both cases and deaths. In 1936 the case rate per 100,000 population was 390.7. In 1946 the rate was 3.7. In 1936 the death rate was 19.8 per 100,000. In 1946 the rate was 0.4.

It seems to the writer that at the present time when so few cases of malaria are occurring, it is time to change our tactics somewhat. When the problem was mass infections of a population, mass control operations were undertaken. Now it is time to direct our activities to the individual cases which are occurring, and institute appropriate measures where actually needed.

The success of this type operation depends on the reporting of each case of the disease to the State, regional or county health authorities, by the physician who sees the case. Epidemiologic investigation for more effective application of control measures will then complement the county-wide programs as operated today. In order that this method be effective we wish to urge the employment of the thick film for confirmatory purposes so that there will be a minimum of expensive personnel, equipment and material expended on mistaken diagnoses. It seems that this new plan might be an excellent opportunity to eradicate malaria in Georgia. Let us hope and believe that in time our malaria control program may effect this complete eradication. It appears very definitely that malaria is on the way out. When it has crossed the threshold, let us close the door and turn the key.

L. M. CLARKSON, *Director*
Division of Public Health Engineering
Georgia Department of Public Health

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## UNITED FRONT

Working through county, state and national medical associations, doctors of medicine have accomplished what once was thought virtually impossible in improving health and living conditions in America.

The family doctor and the medical specialist have combined talents, research and effort in boosting the birth rate and lowering the death rate.

Many millions of people from coast to coast have protected themselves and their families against the costs of hospital care and sickness by the Blue Cross plans, the nonprofit voluntary plans for paying the costs of hospital and medical care. These Blue Cross plans, designed and approved by family doctors of medicine, have worked successfully for many years.

Leading economists report the wide use of prepaid voluntary medical plans is one reason the average American's budget needs less ready cash for sickness than ever before. The second reason for this decrease is the result of progressive research on the part of medical doctors and other medical scientists in the fight against ill health.

Through nationwide cooperation, medical doctors have fostered improvement of industrial health and have expanded preventative medical services such as cancer detection centers and rheumatic fever control stations. New hospitals and health facilities have been hastened by doctors' encouragement and health education is better and more widely available than ever before.

One of the most recent developments is proposed extension of good medical care found in the city to the great numbers of people in suburban and rural areas. The time is approaching when the farmer will be little farther in point of time from a good hospital or medical center than the man in the city.—*Michigan State Medical Society.*

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**The Medical Association of Georgia centnenial session will be held at the Hotel DeSoto, Savannah, May 10-13, 1949.**

# REGISTRATION AT THE NINETY-EIGHTH ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF GEORGIA

A

Abbott, Osler A., Atlanta
Adair, M. C., Washington
Adams, B. C., Thomaston
Agee, M. P., Augusta
Agnor, E. B., Atlanta
Akin, John T., Jr., Atlanta
Alden, Herbert S., Atlanta
Alexander, George H., Forsyth
Alford, Dale, Atlanta
Allen, C. H., Bremen
Allen, Eustace A., Atlanta
Allen, H. D., Milledgeville
Allison, Gordon G., Atlanta
Amis, Frank J., Hogansville
Anderson, Robert T., Atlanta
Anderson, Sam A., Milledgeville
Anderson, W. W., Atlanta
Andrews, Chas. R., Jr., Canton
Arnold, J. T., Parrott
Arnold, M. F., Hawkinsville
Arp, C. Raymond, Atlanta
Arrendale, Joe J., Cornelia
Ashford, John W., Atlanta
Atkinson, Harold C., Macon
Atwater, John S., Atlanta
Aven, C. C., Atlanta
Ayer, Darrell, Jr., Atlanta
Ayers, A. J., Atlanta
Ayers, C. L., Toccoa

B

Bagley, D. A., Austell
Bailey, M. K., Atlanta
Bailey, Thomas E., Augusta
Baird, J Mason, Atlanta
Ballenger, W. L., Atlanta
Bancker, E. A., Atlanta
Barner, John L., Athens
Barnett, Crawford F., Atlanta
Bartlett, Walter M., Atlanta
Barton, W. L., Macon
Bateman, Needham B., Atlanta
Battle, Lee H., Jr., Rome
Baxley, W. W., Macon
Beard, Donald E., Atlanta
Beasley, B. T., Atlanta
Bell, A. G., Wrightsville
Bell, John A., Jr., Dublin
Bell, Rudolph, Thomasville
Bellhouse, Helen W., Thomasville
Bennett, V. H., Gay
Benson, H. Bagley, Atlanta
Benson, Marion T., Jr., Atlanta
Berry, Maxwell, Atlanta
Bishop, Everett L., Atlanta
Blackford, L. Minor, Atlanta
Blaine, B. C., Atlanta
Blalock, Frank A., Rome
Blalock, J. C., Atlanta
Blalock, Tully T., Atlanta
Bleich, Jack K., Atlanta
Blum, Leo J., Jr., Warner Robins
Blumberg, Max M., Atlanta
Blumstein, Charles L., Columbus
Boland, Frank K., Atlanta
Boland, F. Kells, Jr., Atlanta
Boland, Joe H., Atlanta
Boling, Edgar, Atlanta
Bondurant, H. Wm., Atlanta
Bowdoin, W. H., Statham
Boyd, Hartwell, Atlanta
Boyette, L. S., Ellaville
Boynton, Estelle P., Atlanta
Bradley, R. H., Chatsworth
Brawner, Albert F., Atlanta
Brawner, James N., Atlanta
Brawner, James N., Jr., Atlanta
Bridges, Glenn J., Atlanta
Brim, J. C., Pelham
Brittingham, John W., Augusta
Broaddrick, G. L., Dalton
Brooke, G. C., Canton
Brooks, Henry W., Buena Vista
Brown, Hilton J., Sylvester
Brown, Robert L., Atlanta
Brown, Samuel Y., Atlanta
Brown, S. Ross, Atlanta
Brown, Stephen T., Atlanta
Bryan, William W., Atlanta
Bunce, Allen H., Atlanta
Burch, J. C., Atlanta
Burdashaw, W. J., Augusta
Burdine, W. E., Blue Ridge
Burgess, Taylor S., Atlanta
Busey, T. J., Fayetteville
Bush, A. R., Hawkinsville
Byers, Kathleen, Atlanta
Byram, James H., Atlanta
Byrd, T. Luther, Atlanta

C

Cagle, W. D., Rome
Calhoun, F. Phinizy, Atlanta
Calhoun, F. P., Jr., Atlanta
Callaway, Enoch, LaGrange
Campbell, James L., Jr., Atlanta
Campbell, John D., Atlanta
Campbell, J. L., Atlanta (Deceased)
Carter, R. L., Thomaston
Carter, Sandy B., Atlanta
Cason, Hugh B., Warrenton
Cason, Wm. M., Atlanta
Cathcart, Don F., Atlanta
Chaffin, E. F., Toccoa
Chambers, J. W., LaGrange
Champion, W. L., Atlanta
Chaney, Ralph Hill, Augusta
Chappell, Amey, Atlanta
Chaudron, P. O., Cedartown
Cheek, O. H., Dublin
Cheves, H. L., Union Point
Childs, J. R., Atlanta
Christopher, F. E., Atlanta
Clark, James J., Atlanta
Clark, W. H., LaGrange
Clarke, Maurice L. B., Atlanta
Clifton, Ben H., Atlanta
Cofer, Olin S., Atlanta
Coker, Grady N., Canton
Cole, T. M., Albany
Coleman, Fred J., Dublin
Coleman, Reese C., Jr., Atlanta
Coleman, Y. R., Jonesboro
Coles, William C., Atlanta
Collier, Thos. J., Atlanta
Collier, T. W., Brunswick
Collins, Braswell E., Waycross
Collins, J. J., Thomasville
Collinsworth, Allen M., Atlanta
Colquitt, H. S., Smyrna
Combs, J. A., Atlanta
Combs, James M., Atlanta
Conger, Preston D., Moultrie
Cooper, F. W., Jr., Atlanta
Coppedge, W. W., East Point
Corn, Ernest, Macon
Corry, J. A., Barnesville
Crawford, H. C., Atlanta
Crawford, John B., Barnesville
Crawley, Walter G., Marietta
Crighton, Robt. B., Milledgeville
Cross, John B., Atlanta
Cruise, Joe S., Atlanta

D

Dancy, William R., Savannah
Daniel, Charles H., College Park
Daniel, W. W., Atlanta
Davis, Abe J., Augusta
Davis, Shelley C., Atlanta
Davison, Hal M., Atlanta
Davison, T. C., Atlanta
Dew, J. Harris, Atlanta
DeFreese, S. J., Monroe
Denmark, Leila D., Atlanta
Denney, Roy L., Carrollton
Denton, John F., Atlanta
Derrick, H. C., Oglethrope
Derrick, H. C., Jr., LaFayette
DeVaughn, N. M., Augusta
Dick, Fred, Jr., Augusta
Dickens, C. H., Madison
Dickson, Roger W., Atlanta
Dillard, G. J., Columbus
Dimmock, A. M., Atlanta
Dobes, Wm. L., Atlanta
Dorough, W. S., Atlanta
Dougherty, Mark S., Atlanta
Dowman, Charles E., Atlanta
Dowman, Cordelia K., Atlanta
Downey, Wm. P., Tallapoosa
Drane, Robert, Savannah
Dunstan, E. M., Atlanta
Durham, Bon M., Americus
Durham, W. P., Abbeville
DuVall, W. B., Atlanta

E

Earle, Walter C., Atlanta
Eberhart, Charles, Atlanta
Edgerton, M. T., Atlanta
Edwards, Wm. T., Atlanta
Eldridge, Franklin G., Valdosta
Elliott, John L., Savannah
Elliott, W. G., Cuthbert
Equen, Murdock, Atlanta
Eskridge, Frank, Atlanta
Estes, H. G., Atlanta
Etheridge, William N., Atlanta
Evans, Albert L., Atlanta

F

Fancher, J. K., Atlanta
Farmer, C. Hall, Macon
Ferguson, Ira A., Atlanta
Fernan-Nunez, M., Milledgeville
Ferrell, T. J., Waycross
Fincher, Edgar F., Atlanta
Fitts, John B., Atlanta
Flanagan, W. M., Waycross
Fleming, C. A. Tifton
Fletcher, I. Elizabeth, Statesboro
Florence, Loree, Athens
Floyd, Chas. S., Loganville
Floyd, Earl, Atlanta
Floyd, Waldo E., Statesboro
Fort, C. A., Jr., Atlanta
Fort, M. A., Bainbridge
Fowler, A. H., Marietta
Fowler, C. Dixon, Atlanta
Fowler, M. F., Atlanta
Fowler, R. W., Marietta
Frierson, Norton, Jr., Atlanta
Fuller, Geo. W., Atlanta

Fuller, William A., Augusta
Funke, John, Atlanta
Funkhouser, W. L., Atlanta

G

Gabler, Regina, Atlanta
Gallemore, J. L., Perry
Garner, J. R., Atlanta
Garrard, J. L., Rome
Garrett, John A., Meigs
Garrett, Luke G., Jr., Austell
Garrison, D. H., Clarkesville
Gatewood, T. Schley, Americus
Gay, T. Bolling, Atlanta
Germain, A. H., Atlanta
Giddens, I. S., Adel
Gilbert, R. B., Greenville
Gilbert, W. M., Rome
Glisson, C. S., Jr., Atlanta
Gold, Perry, Atlanta
Goodpasture, W. C., Atlanta
Goodwyn, T. P., Atlanta
Goodyear, Wm. E., Atlanta
Grace, Kenneth D., LaGrange
Grady, H. W., LaGrange
Green, James A., Jr., Athens
Greenberg, Irving L., Atlanta
Greenblatt, Robert B., Augusta
Greene, Edgar H., Atlanta
Griffin, Claude, Atlanta
Griffin, E. L., Atlanta
Griffin, L. H., Claxton
Griggs, Harvey E., Conyers
Gross, O. S., Vidalia
Grove, Lon, Atlanta

H

Hagood, M. M., Marietta
Hall, W. D., Calhoun
Hallum, Alton V., Atlanta
Ham, Emerson, Savannah
Hamm, W. G., Atlanta
Hammond, G. W., Newnan
Hammond, R. L., Jackson
Hand, B. Hollis, LaGrange
Hanner, James P., Atlanta
Harbin, Lester, Rome
Harbin, William, Rome
Harper, Fred M., Jesup
Harris, B. W., St. Simons Island
Harris, H. B., Athens
Harris, Raymond, Ocilla
Harrison, F. N., Augusta
Harrison, M. T., Atlanta (Deceased)
Harvey, C. W., Hogansville
Hatcher, Milford B., Macon
Hazlehurst, W. D., Macon
Head, Homer, Monroe
Head, M. M., Zebulon
Helms, William C., Atlanta
Helton, B. L., Sandersville
Hendrix, A. M., Canton
Henry, Lamont, Atlanta
Herman, E. C., LaGrange
Hess, George, Atlanta
Hewell, Guy C., Atlanta
Heyman, Albert, Atlanta
Hicks, Thos. J., McCaysville
Hill, W. H., Atlanta
Hitchcock, J. P., Augusta
Hobby, A. Worth, Atlanta
Hock, Charles W., Augusta
Hodgson, Fred G., Atlanta
Holder, J. S., LaGrange
Holland, S. P., Blakely
Holloway, Geo. A., Atlanta
Holmes, L. P., Augusta
Holmes, Walter R., Atlanta
Holton, C. F., Savannah
Hopkins, Anne, Savannah
Howell, Stacy C., Atlanta
Hubert, M. A., Athens
Huie, Lynn M., Monroe
Hunter, Conway, Atlanta
Hurt, M. W., Sandersville
Hutchins, J. T., Atlanta
Hydrick, Peter, College Park

I

Ivey, John C., Atlanta

J

Jackson, Zach W., Atlanta
James, L. P., Macon
Jennings, James L., Atlanta
Jernigan, C. S., Sparta
Jernigan, H. W., Atlanta
Johnson, McClaren, Atlanta
Johnson, Ralph N., Rome
Jones, Chas. S., Atlanta
Jones, E. G., Eastman
Jones, G. Frank, Jr., Augusta
Jones, Jack W., Atlanta
Jones, John Paul, Macon
Jones, Robert E., Tifton
Jordan, W. P., Columbus
Jordan, W. P., Jr., Columbus

K

Kay, Jas. B., Byron
Keaton, John C., Albany
Keen, O. F., Macon
Kelley, D. C., Lawrenceville
Kelley, L. H., Atlanta
Kellum, J. M., Thomaston
Kelly, G. Lombard, Augusta
Kelly, James D., Atlanta
Kemper, Clifton G., Atlanta
Kennedy, R. L., Metter
Kenyon, Steve P., Dawson
King, J. L., Macon
King, J. T. Atlanta
King, W. R., Jr., Griffin
Kirkland, Spencer A., Atlanta
Kiser, Wm., Jr., Atlanta
Kite, J. H., Atlanta
Klemann, Gilbert L., Augusta
Klugh, George F., Atlanta
Krantz, S., Atlanta
Krugman, Philip, Atlanta
Kusnitz, Morris, Jr., Alamo

L

Lake, Wm. F., Atlanta
Lancaster, E. M., Shady Dale
Landham, J. W., Atlanta
Lange, J. Harry, Atlanta
Lanier, L. I., Soperton
Lawrence, Chas. E., Atlanta
Leaphart, J. A., Jesup
Leonard, Wm. P., Atlanta
Leslie, John T., Decatur
Letton, A. H., Atlanta
Lever, Joseph E., Sandersville
Levin, Jack M., Atlanta
Linch, A. O., Atlanta
Lindley, F. P., Powder Springs
Lineback, Merrill I., Atlanta
Lipscomb, Laura L., Atlanta
Logan, J. C., Plains
Logue, Bruce, Atlanta
Lokey, Hugh M., Atlanta
Long, Leonard, Atlanta
Longino, D. R., Atlanta
Looper, Ben Keith, Canton
Lord, C. B., Jefferson
Lower, E. G., Atlanta
Lowance, Mason I., Atlanta
Lunsford, Guy G., Atlanta

M

Maloy, C. J., McRae
Maner, Edwin N., Savannah
Manget, J. D., Jr., Atlanta
Marshall, A. S., Fort Valley
Martin, Anthony J., Atlanta
Martin, Elisabeth, Atlanta
Martin, J. D., Jr., Atlanta
Martin, James J., Atlanta
Martin, John M., Augusta
Martin, Walter D., Shellman
Martin, William O., Jr., Atlanta
Mashburn, Marcus, Cumming
Mass, Max, Macon
Massee, Joseph C., Atlanta
Massey, W. F., Chester
Matthews, O. H., Atlanta
Matthews, Thos. V., Atlanta
Matthews, W. Eugene, Augusta
Mauldin, John T., Atlanta
Mauldin, John W., Alma
Mays, J. R. S., Macon
McAllister, J. A., Atlanta
McCain, John R., Atlanta
McCall, J. T., Rome
McCall, John T., Jr., Rome
McCarver, W. C., Vidette
McCarver, W. C., Jr., Glennville
McClure, Robert E., Atlanta
McCollum, R. R., Kingsland
McCord, Ralph B., Rome
McCoy, W. R., Folkston
McDaniel, J. G., Atlanta
McDonald, Edward M., Winder
McDonald, Harold P., Atlanta
McDonald, Lewis H., Atlanta
McDougall, J. Calhoun, Atlanta
McDougall, Wm. L., Atlanta
McElroy, J. D., Atlanta
McGahee, R. C., Augusta
McGeary, W. C., Madison
McGee, H. H., Savannah
McGinty, Howard C., Augusta
McGuire, T. H., Union Point
McLaughlin, C. K., Macon
McLoughlin, Christopher J., Atlanta
McMath, W. B., Jr., Americus
Meaders, H. D., Newnan
Mercer, J. E., Vidalia
Merritt, James W., Colquitt
Mickel, Carey A., Jr., Atlanta
Milford, J. Hubert, Hartwell
Miller, Hal C., Atlanta
Miller, Linns J., Atlanta
Minor, H. W., Atlanta
Mitchell, Frank B., Jr., Metter
Mitchell, Marvin A., Atlanta
Mitchell, W. C., Smyrna
Mitchell, William E., Atlanta
Moncrief, W. M., Atlanta
Montgomery, R. C., Butler
Mooney, John, Jr., Statesboro
Moore, Henry M., Thomasville
Morgan, F. W., Douglasville
Morgan, J. C., West Point
Mosley, H. G., Atlanta
Mulherin, Philip A., Augusta
Mulkey, A. P., Millen
Mullins, D. F., Jr., Athens
Murphy, W. J., Atlanta
Musarra, E. A., Marietta
Myers, Martin T., Atlanta

N

Neely, F. L., Atlanta
Neill, Frank K., Albany
Nesbit, F. C., Covington
Nevil, J. L., Metter
Newman, W. A., Macon
Newsom, N. J., Sandersville

Nicolson, Wm. Perrin, Atlanta
Niles, George A., Jr., Atlanta
Nippert, Philip H., Atlanta
Norvell, J. T., Augusta

O

Olds, Bomar A., Atlanta
O'Neal, John B., III, Elberton
O'Neal, R. S., LaGrange
Oppenheimer, Russell H., Atlanta
Osborne, V. W., Atlanta
Osteen, W. L., Savannah
Owensby, N. M., Atlanta

P

Palmer, C. B., Covington
Palmer, J. W., Ailey
Parkerson, S. T., McRae
Patrick, Elwyn V., Carrollton
Patterson, J. C., Cuthbert
Paullin, James E., Atlanta
Payne, Rufus, Rome
Peacock, J. D., Wadley
Pendergrass, Robert C., Americus
Pendergrast, Wm. J., Atlanta
Pennington, C. L., Macon
Pennington, L. E., Milledgeville
Pennington, V. M., Milledgeville
Perkinson, W. H., Marietta
Person, W. E., Atlanta
Peterson, T. A., Savannah
Petrie, Lester M., Atlanta
Pettit, J. T. Canton
Phillips, Hayward S., Atlanta
Philpot, W. K., Augusta
Pierotti, Julius V., Atlanta
Pinkston, A. G., Jr., Glennville
Pittman, J. L., Atlanta
Pittman, Oliver C., Commerce
Poer, David Henry, Atlanta
Poole, E. T., Lavonia
Powell, F. C., Decatur
Pritchett, J. H., Jr., Bremen
Pruce, Arthur M., Atlanta
Pruitt, M. C., Atlanta
Puett, W. W., Norcross

R

Ragland, Fred B., Dalton
Rasmussen, Earl, Atlanta
Read, Ben S., Atlanta
Read, Joseph C., Atlanta
Reavis, W. F., Waycross
Redd, Stephen C., Atlanta
Redfearn, J. A., Albany
Reese, D. S., Carrollton
Reifler, R. M., Macon
Revell, Walter J., Louisville
Reynolds, H. M., Cairo
Rhodes, C. A., Atlanta
Rhyne, W. P., Albany
Rice, Guy V., Atlanta
Richards, Charles K., Calhoun
Richardson, C. H., Macon
Richardson, C. H., Jr., Macon
Richardson, Jeff L., Atlanta
Ridley, C. L., Macon
Ridley, C. L., Jr., Macon
Ridley, H. W., Atlanta
Rieser, Charles, Atlanta
Rieth, Paul L., Atlanta
Ridgway, R. E., Royston
Riley, Julian G., Atlanta
Risteen, W. A., Augusta
Roberts, C. Purcell, Atlanta
Roberts, O. W., Carrollton
Robinson, David, Savannah
Robinson, Joe S., Dallas
Robinson, R. L., Atlanta
Rogers, Harry, Atlanta
Rogers, J. V., Cairo
Rogers, R. L., Gainesville
Roper, C. J., Jasper
Roper, E. A., Jasper
Rosen, E. A., Dalton
Rosen, E. F., Savannah
Rosen, S. F., Savannah
Rosenberg, H. J., Atlanta
Ross, Thos. L., Jr., Macon
Rouglin, L. C., Atlanta
Roule, J. Victor, Augusta
Rubin, S. N., Gordon
Rudder, Fred F., Atlanta
Rumble, Charles T., Macon
Rushin, C. E., Atlanta
Russell, Alexander B., Winder
Russell, David A., Jr., Atlanta
Russell, Paul L., Albany

S

Saggus, J. G., Harlem
Sams, J. R., Covington
Sanchez, A. S., Atlanta
Sanders, A. S., Atlanta
Sapp, C. J., Rome
Sappington, T. A., Thomaston
Savage, C. P., Montezuma
St. John, J. O., Newnan
Scales, S. F., Carrollton
Scarborough, J. Elliott, Atlanta
Schaefer, W. B., Toccoa
Schneider, J. F., Atlanta
Sealey, R. M., Atlanta
Seaman, H. A., Waycross
Selman, W. A., Atlanta
Semans, James H., Atlanta
Sellers, T. F., Atlanta
Shackleford, B. L., Atlanta
Shanks, Edgar D., Atlanta
Sharp, C. K., Arlington
Shepard, Duncan, Atlanta
Shepard, W. O. Bluffton
Shiflet, Robert E., Toccoa
Simmons, J. W., Brunswick
Simonton, Fred H., Chickamauga
Simpson, Addison W., Jr., Washington
Simpson, John A., Athens
Singer, Arthur G., Toccoa
Sinkoe, Samuel J., Atlanta
Skobba, Joseph S., Atlanta
Sloan, W. P., Atlanta
Smaha, T. G., Griffin
Smith, Geo. B., Rome
Smith, J. E., Fitzgerald
Smith, Leo., Waycross
Smith, Linton, Atlanta
Smith, M. F., Atlanta
Smith, Wm. A., Atlanta
Smith, W. P., Decatur
Snelling, J. M., Jr., Ashburn
Standifer, J. G., Blakely
Stanton, W. B., Atlanta
Stapleton, J. L., Columbus
Staton, T. R., Atlanta
Steadman, H. E., Hapeville
Stephens, A. Leslie, Jr., Atlanta
Stewart, Calvin B., Atlanta
Stewart, J. Benham, Macon
Stewart, Philip R., Monroe
Stillerman, H. B., Atlanta
Stone, Chas. F., Jr., Atlanta
Suarez, Raymond, Macon
Swanson, Cosby, Atlanta
Swilling, Evelyn, Macon

T

Talmadge, Sam M., Athens
Tankesley, Robert S., Atlanta
Tarplee, Scott L., Atlanta
Taylor, R. L., Davisboro
Taylor, William J., Davisboro
Thomas, David R., Augusta
Thomas, Russell B., Americus
Thompson, Cleve, Millen
Thompson, D. N., Elberton
Thompson, D. O., Atlanta
Thompson, Ernest, Monroe
Thompson, E. F., Valdosta
Thompson, John W., Atlanta
Thompson, Wm. C., Atlanta
Thwaite, Walter G., Quitman
Tidmore, Jos. C., Dawson
Tidmore, T. L., Atlanta
Tift, Henry H., Macon
Torpin, Richard, Augusta
Travis, W. D., Covington
Tribble, J. M., Senoia
Trimble, Wm. H., Atlanta
Trincher, Irvin H., Atlanta
Turk, L. N., Jr., Atlanta
Turner, Edwin W., East Point
Turner, John W., Atlanta

U

Upchurch, W. E., Atlanta
Upshaw, Chas. B., Atlanta

V

Van Buren, E., Atlanta
Varner, John B., Atlanta
Velkoff, Abraham S., Atlanta
Victor, Jules, Jr., Savannah
Vinson, Curtis D., Atlanta
Vinson, Frank, Fort Valley
Vinson, Thos. O., Griffin
Volpitto, Perry P., Augusta

W

Wagnon, George N., Atlanta
Wahl, Ernest F., Thomasville
Walker, Exum, Atlanta
Wall, C. K., Thomasville
Waller, Robert D., Milledgeville
Wallis, H. G., Columbus
Walton, John M., Atlanta
Ware, D. B., Fitzgerald
Ware, Ford, Macon
Warner, W. P., Jr., Atlanta
Wasden, C. N., Macon
Watson, Edwin R., Macon
Watters, Julian Q., Toccoa
Weaver, H. G., Macon
Weaver, O. H., Macon
Webb, Fred L., Nashville, Tenn.
West, C. M., Atlanta
West, Edward M., Atlanta
Westbrook, R. J., Ila
Wheat, R. F., Bainbridge
Whitfield, T. W., Dalton
Whipple, Robert L., Jr., Atlanta
Whitworth, C. W., Gainesville
Wienberg, James I., Atlanta
Williams, A. F., Savannah
Williams, C. Roy, Wadley
Williams, David C., Decatur
Williams, David C., Jr., Milledgeville
Williams, Geo. A., Atlanta
Willingham, T. I., Atlanta
Williams, J. Weldon, Jr., Lavonia
Williams, L. W., Savannah
Williams, P. L., Cordele
Williams, P. L., Jr., Cordele
Williams, W. J. Augusta
Wine, Mervin B., Thomasville
Wolff, Bernard P., Atlanta
Wolff, Luther H., Columbus
Wood, D. Lloyd, Dalton
Wood, James A., Macon
Worth, Jack J., Jr., Atlanta
Wright, Edward S., Atlanta
Wright, Geo. W., Augusta
Wright, Peter B., Augusta

Y

Yampolsky, Joseph, Atlanta
Youmans, C. R., Hazlehurst

VISITORS

A

Allgood, J. L., Jr., Augusta
Askew, Rufus, Atlanta
Askren, E. L., Jr., Atlanta

B

Baehren, Paul F., Chattanooga, Tenn.
Baker, L. P., Atlanta
Bass, E. C., Carrollton
Bazilauskas, V. F., Marietta
Benton, Chas. C., Augusta
Blumenthal, Lester S., Washington, D. C.
Blumberg, Catherine W., Augusta
Blumberg, Joe M., Augusta
Brown, C. MacKenzie, Albany

C

Carter, Curtis H., Augusta
Carver, J. R., Chattanooga, Tenn.
Chen, Calvin H., Augusta
Clements, C. G., Daisy, Tenn.
Counts, Russell L., Chattanooga, Tenn.
Crispell, Raymond S., Atlanta

F

Feen, B. G., Oakland, Calif.
Ferrell, Haskins, Jr., Alexandria, Va.
Filip, A. J., Atlanta
Findley, Thomas, New Orleans, La.
Flanagin, W. Stewart, Jacksonville, Fla.

G

Gardner, Wm. A., Augusta
Garland, C. M., Atlanta
Garvin, William J., Jr., Dunnellon, Fla.

H

Hall, S. P., Scottsboro, Ala.
Harris, Marvin M., Macon
Herrmann, George R., Galveston, Texas
Hopkins, William A., Atlanta

J

Jordan, Charles G., Eatonton

K

Kendall, Ben H., Shelby, N. C.
James L. King, Jr., Macon
King, Richard, Marietta

L

Lawson, Robert B., Winston-Salem, N. C.
Ledbetter, Marion K., Keesler Field, Miss.
Lee, Howard B., Atlanta

M

Marvin, Charles P., Atlanta
Massey, Clayton M., Waycross
Maxwell, E. J., Jr., Atlanta
McCravey, Augustus, Chattanooga, Tenn.
McRae, Floyd W., Atlanta
Mitchell, Chas. H., Augusta
Murray, Oscar B., Chattanooga, Tenn.
Muse, L. H., Atlanta

N

Nash, S. S., Atlanta
Nelson, W. J., Atlanta
Nieburgs, H. E., Augusta
Norris, Jack C., Atlanta

P

Pattillo, C. E., Decatur
Pinson, C. H., Alpharetta

R

Reeves, F. E., Jr., Atlanta
Roberts, W. V., Jacksonville, Fla.
Robertson, J. Righton, Augusta
Rogers, George C., Atlanta
Rogers, T. E., Jr., Macon
Russell, Edward K., Atlanta

S

Salter, W. Lawrence, Hampton, S. C.
Silver, Max I., Columbus
Sims, J. N., Comer
Smith, Joel P., Atlanta
Smith, Ralph B., Atlanta
Stampa, S., Atlanta
Strickland, M. A., Atlanta
Suran, R. R., Augusta

T

Taylor, J. E., Atlanta
Taylor, T. V., Atlanta
Traylor, J. B., Augusta

W

Ware, Newton C., Macon
Weinstein, Jacob J., Washington, D. C.
Whatley, George S., LaGrange
Wylie, H. M., Augusta

Y

Young, George G., Chattanooga, Tenn.

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## NEWS ITEMS

Dr. W. C. Baxley, Blakely, was recently added to the staff of the Wall Hospital, Blakely. The hospital staff includes Drs. W. H. Wall, J. G. Standifer, Warren C. Baxley and John McLeod.

* * *

Dr. Hal Davison, Atlanta, addressed the spring meeting of the Atlanta and Georgia Dietetic Association held at the Henry Grady Hotel, Atlanta, May 8. Dr. Davison, a director of the American Academy of Applied Nutrition and immediate past president of the American College of Allergy, spoke on "Nutrition and Teaching."

* * *

Dr. Arthur Carpenter, formerly of Chipley, announces the opening of his office at Hamilton for the practice of medicine.

* * *

Dr. Amey Chappell, Atlanta, announces the removal of her offices to suite 104, 795 Peachtree Street, N. E., corner Peachtree and Fifth streets, Atlanta. Practice limited to obstetrics and internal medicine.

* * *

Lt. Col. Edward A. Cleve, M.C., U.S. Army, formerly stationed at the Oliver General Hospital, Augusta, has been transferred to the 22nd Station Hospital, Guam, M. I. His address is 22nd Station Hospital, APO 246, care Postmaster, San Francisco, California.

* * *

Dr. T. A. Cochran, formerly of LaFayette, a graduate of the University of Georgia School of Medicine, Augusta, and recently discharged from the U. S. Army Medical Corps, announces the opening of a medical clinic at Ringgold for the practice of medicine.

* * *

Dr. J. J. Croley, formerly of Jenkins, Ky., recently accepted the position as commissioner of health of Walker, Dade and Chattooga counties. Dr. Croley is a graduate of the University of Tennessee College of Medicine, Memphis, Tenn., interned at New Orleans and New York, and for 10 years was in public health work in Alabama, North Carolina and Michigan. For the past few years he has been in the private practice of medicine in Kentucky.

The Fulton County Medical Society dinner meeting was held at the Academy of Medicine, Atlanta, May 20. Scientific program: "Panel Discussion of the Antibiotics". Dr. Lamont Henry, moderator. Speakers included Drs. Max Michael, Jr., Duncan Shepard, Warren B. Matthews and Paul Beeson.

* * *

Drs. Herschel Crawford, John Duncan, Spencer Kirkland, Floyd McRae and Wm. Perrin Nicolson, all of Atlanta, attended the Eighteenth Annual Meeting of the Southern Society of Clinical Surgeons held at the Palmer House, Chicago, May 26-28. Dr. Wm. Perrin Nicolson, Atlanta, secretary-treasurer.

* * *

The Georgia Medical Society held its regular meeting at the society's hall, 612 Drayton Street, Savannah, May 11. Dr. John Bordley, Baltimore, associate professor of otolaryngology, Johns Hopkins University School of Medicine, was guest speaker. His subject was, "Diagnosis and Care of Deafness in Children."

* * *

Dr. Herbert S. Alden, Atlanta, recently read a paper entitled "Further Experiences with Roentgen Irradiation of the Eye" at the American Dermatology Convention held in Los Angeles, Calif.

* * *

Dr. Edgar M. Dunstan, Atlanta, recently attended the annual meeting of the American College of Physicians in San Francisco, Calif., where he completed the oral examination and was certified by the American Board of Internal Medicine.

* * *

Dr. Walter W. Daniel, Atlanta, was guest speaker at the Cobb County Medical Society, Marietta, May 4. He discussed the "Treatment of Toxemias of Pregnancy."

* * *

The Georgia Public Health Association held its nineteenth annual meeting in Savannah, May 10, 11 and 12. Approximately 400 public health workers from all Georgia counties were joined by visiting observers from the Carolinas, Florida and other States. Featured speakers from Georgia were Acting Gov. M. E. Thompson; Dr. Thomas F. Sellers, State Health Director; Dr. H. C.

Schenck, State Tuberculosis Director; Dr. Edgar H. Greene, president of the Medical Association of Georgia; County Health Commissioners, Dr. James A. Thrash, Columbus, and Dr. T. O. Vinson, Griffin. National public health officials to address the convention included Dr. Thomas L. Hagan, director of the dental division, district four, U. S. Public Health Service; Dr. John Bordley, associate professor of otolaryngology, Johns Hopkins University, Baltimore, Md., and Miss Ruth Taylor, director nursing unit, U. S. Children's Bureau, Washington, D. C. Dr. Clair A. Henderson, Savannah, Chatham County Health Commissioner, was installed as president. Dr. James A. Thrash, Columbus, Muscogee County Health Commissioner was named president-elect. F. W. Rhodes, Rome, regional sanitary engineer, was named vice-president, and Miss Annie Taylor, Atlanta, Georgia Department of Public Health, was elected secretary-treasurer. Selection of next year's meeting place was left to the executive committee.

* * *

Grady Memorial Hospital, Atlanta, was host to more than 50 physicians from throughout the Eastern United States, May 17-21, who were studying the latest technics in applying electro-physics to the battle against America's number one killer—heart disease. Dr. Russell H. Oppenheimer, Atlanta, Emory director of post-graduate medical education, said cardiologists at Emory University Hospital, Grady Hospital, and Lawson Veterans Administration Hospital set up the program for the five-day course.

* * *

Dr. Walter G. Hackett, Rome, has been named plant physician at the Rome Celanese Plant to replace Dr. W. A. Sewell, Rome, recently retired from the company's service. Dr. Hackett is a graduate of Duke University School of Medicine, Durham, N. C.

* * *

Dr. Frank Hardeman, a native of Louisville, recently assumed the duties as one of the resident physicians at the Warren A. Candler Hospital, Savannah. Dr. Hardeman graduated from the University of Georgia School of Medicine, Augusta, in 1945. He served a twelve-month internship at the Naval Hospital, Jacksonville, Fla., and was then assigned to the U. S. S. Chukawan, on which vessel he served for nearly two years.

* * *

Lowndes County Tumor Clinic, newest of the 14 state-aid clinics, was host to 70 South Georgia physicians at a symposium on cancer held in Valdosta, May 18. The meeting is the sixth in a series of similar refresher sessions sponsored jointly by the Medical Association of Georgia, the American Cancer Society and the Georgia Department of Public Health. Four of the most common types of cancer were discussed by speakers who brought information on the latest developments in their diagnosis and treatment. Dr. Thomas Harrold, Macon, director of the Macon Tumor Clinic, opened the session with a paper on "Cancer of the Breast." Dr. Charles Jones, Atlanta, spoke on "Cancer of the Stomach and Colon." Dr. James H. Semans, Atlanta, discussed "Cancer of the Genito-urinary Tract," and Dr. J. Elliott Scarborough, Emory University, spoke on "Cancer of the Uterus. All physicians in the following counties were invited: Irwin, Tift, Coffee, Cook, Berrien, Atkinson, Lanier, Clinch, Brooks, Lowndes and Echols. Dr. Frank G. Eldridge, Valdosta, director of the Lowndes County Tumor Clinic, introduced the speakers.

* * *

Dr. Alvin D. Josephs, Atlanta, announces the removal of his office to 826 Peachtree Street, N. E., Atlanta, for the practice of internal medicine and diagnosis.

* * *

Dr. Clayton M. Massey, Fitzgerald, announces his association with Dr. Harold W. Muecke, 202 Folks Street, Waycross. Practice limited to diseases of infants and children.

Dr. H. H. McGee, Savannah, was elected president of the Georgia Radiological Society at the meeting held in Atlanta, April 29. Dr. Max Mass, Macon, was elected vice-president, and Dr. Robert Drane, Savannah, was re-elected secretary-treasurer.

* * *

Dr. C. C. Odum, Augusta, of the Veterans Administration Hospital, was recently re-elected president of the Southeastern Society of Neurology and Psychiatry at its meeting held in Orangeburg, S. C. Dr. W. A. Risteen, Augusta, began another year as vice-president, and Dr. William Burdashaw, Augusta, was named secretary-treasurer. The next meeting will be held at Milledgeville in September.

* * *

Dr. James E. Paullin and Dr. Paul Beeson, both of Atlanta, were invited to attend the centennial celebration of the South Carolina Medical Association in Charleston, S. C., May 12-14. The Atlanta physicians addressed the association on various phases of medical practice.

* * *

Dr. David Henry Poer, Atlanta, was elected president of the Georgia Chapter of the American College of Surgeons at their meeting held in Atlanta during the annual session of the Medical Association of Georgia. Dr. Ansley Seaman, Waycross, was named vice-president; Dr. M. T. Harrison, Atlanta, secretary-treasurer; and Dr. Hugh Lokey, Atlanta, and Dr. J. C. Patterson, Cuthbert, members of the council. There will be a scientific meeting of the Georgia Chapter of the American College of Surgeons and the Georgia Chapter of the American Urological Association held at Macon next fall, the date to be announced later.

* * *

The Georgia Chapter of the National Foundation of Infantile Paralysis met at the Academy of Medicine, Atlanta, May 14. Program was under the direction of Dr. R. Hugh Wood, Atlanta, dean of the school of Medicine Emory University. Welcome and introductions by Dr. James E. Paullin, Atlanta, Medical Advisory Committee, The National Foundation for Infantile Paralysis and the Georgia State Chapter; The Poliomyelitis Program of Grady Memorial Hospital and the Emory Medical School, Dr. R. Hugh Wood; Pathogenises and Diagnosis of Poliomyelitis, Dr. Wm. F. Friedewald, Atlanta; Early and Convalescent Care of Poliomyelitis Patients—Demonstration, Dr. R. L. Bennett, Warm Springs; Orthopedic Aspects of Treatment of Poliomyelitis, Dr. C. E. Irwin, Warm Springs; Present Status of Experimental Studies on Poliomyelitis, Dr. Theodore E. Boyd, New York; Others on the program were Dr. T. F. Sellers, Atlanta, State Commissioner of Health and Dr. W. J. Murphy, Atlanta, Epidemiologist, Georgia Department of Public Health; Miss Helen Carr, Atlanta, supervisor Crippled Children's Division, State Department of Public Welfare; Mr. Jesse Draper, chairman, Georgia State Chapter, and summary and closing remarks by Dr. James E. Paullin.

* * *

The Georgia Medical Society met at the society's hall, 612 Drayton Street, Savannah, May 25. Paper: "Psychogenesis of Raynaud's Syndrome", Dr. James Craig. Final report on building fund. Dr. Stephen J. Lange, secretary.

* * *

The Ware County Medical Society met at the Ware Hotel, Waycross, May 6. Drs. Joseph R. Gay and A. W. DeLoach were hosts. Dr. Harold W. Muecke presented a paper on "The Pediatric Approach to Patients and Their Families." Dr. L. W. Pierce, secretary.

* * *

The Wilkes County Medical Society honored three venerable physicians at a dinner meeting at the Hotel Johnson, Washington, April 27. Active service of fifty years or more as physicians is the unusual record of Dr. Addison Simpson, Sr., Dr. H. T. Harriss, and Dr.

L. R. Casteel, all Washington-Wilkes medical men. Dr. C. E. Wills, president of the Wilkes County Medical Society, presided, and introduced the three honor guests, each of whom gave a brief talk. It is interesting to note the records of the three physicians. Dr. Simpson attended the Atlanta Medical College, which is now Emory University School of Medicine. He worked with Dr. Willis Westmoreland and Dr. Wm. S. Goldsmith at the old Grady and St. Joseph hospitals in Atlanta, and then went to Pinopolis Saw-mill Company near Moultrie as company physician. Dr. Simpson moved to Washington in the fall of 1902 and opened offices for practice of medicine, which he has continued since. Dr. Harriss graduated from the University of Georgia School of Medicine, Augusta, in 1898. He practiced medicine at Round Oak, Devereux, and Madison before going to Baltimore, Md., to take a three-year post-graduate course in eye, ear, nose and throat diseases. He located in Macon until the Washington General Hospital opened at Washington in 1924, when he came to work in his special field. Dr. Casteel studied a year at the Atlanta Medical College, and received his medical degree from Vanderbilt University School of Medicine, Nashville, Tenn. He did post-graduate work at Baltimore in 1900. In 1906 he returned to the College of Physicians and Surgeons in Atlanta and took another post-graduate course. Dr. Casteel has the distinction of having passed the Georgia, North Carolina, Oklahoma and Tennessee state medical boards and thus has licenses to practice in the these states. He began his medical practice in Cherokee County, N. C., where he stayed for 16 years. In 1910 he came to Wilkes County and had offices in Metasville for many years. For the past 8 years he has practiced in Washington.

* * *

The Ware County Board of Health recently conducted a mass VD-TB survey under the supervision of Dr. George Atwood, commissioner of health in Waycross. Community cooperation in the county-wide x-ray and blood test survey was promised by the representative group of citizens in attendance at the mass meeting held at the Municipal Building. Dr. C. D. Bowdoin, Atlanta, director of the division of preventable disease of the State Health Department explained the operation of the VD-TB program, stressing that for a successful survey the program must have community understanding and community cooperation. Dr. Bowdoin takes pride in the fact that Georgia was the first state to conduct a mass VD-TB survey. Ware's survey was the 19th held in the State since 1945. Dr. B. H. Minchew, Waycross surgeon and member of the State Board of Health, offered the cooperation of Waycross physicians and community leaders for the program which he called one of the most far reaching projects ever accomplished in public welfare. Calling attention to Ware County's outstanding investment and contribution to the health of her citizens, he urged everyone to take advantage of this health offer. He offered to be the first to take the test. Dr. Braswell E. Collins, president of the Ware County Medical Society, and Dr. W. M. Flanagan, endorsed the pogram and predicted beneficial results from the survey. Dr. H. D. Adkins, regional director of the Southeastern Divisional area, who cooperated with the VD-TB survey, offered the assistance of his staff for the survey. Praise was given Dr. Atwood for his outstanding health service.

## OBITUARY

*Dr. William Wright Calhoun*, aged 73, one of the most prominent physicians and useful citizens of Arlington and Southwest Georgia, died following a heart attack May 12, 1948. Dr. Calhoun was born in 1875, the son of the late Mr. and Mrs. J. W. Calhoun. He graduated from the University of the South Medical Department, Sewanee, Tenn., in 1901. He had practiced medicine for 47 years, and served as camp physician for the Woodmen of the World for 40 years. He is survived by his wife, the former Miss Nettie Bass of Blakely, to whom he was married in 1897; three daughters, Mrs. B. F. Teel, Sr., Macon, Mrs. Virginia Faulkner, Atlanta, Mrs. R. D. Gilson, Baltimore, Md.; one son, William W. Calhoun, Jr., Arlington; one sister, Mrs. H. L. Hicks, Daytona Beach, Fla., and eight grandchildren. Funeral services were held at his home on Calhoun Street, Arlington, with the Rev. Charles Allen officiating. Burial was in Oak Grove Cemetery, Arlington.

* * *

*Dr. Chester Anderson Witmer*, aged 61, distinguished Waycross surgeon, died May 7, 1948. Dr. Witmer was born August 22, 1887 in Quarryville, Pa. He graduated from the University of Virginia Department of Medicine, Charlottesville, Va., in 1911. Coming to Waycross in 1915, he associated himself with Dr. Robert C. Walker, as physician for the Hebard Cypress Company. He served as an officer of the Medical Corps of the Army for two years during World War I. Dr. Witmer was held in high esteem by the members of his profession and they conferred many honors upon him in recognition of his ability. He was a member of the Ware County Medical Society, and served as president of that organization; he was president of the Eighth District Medical Society; member of the Medical Association of Georgia, a fellow of the American Medical Association and of the American College of Surgeons. He had served as chief of staff of the Ware County Hospital and was senior surgeon of the staff during the years of World War II. At the time of his death he was city physician, a position he had held for the past ten years. Dr. Witmer's energies and talents were not confined to the professional field alone; he took a keen interest in community affairs, and was first president of the Waycross Kiwanis Club. He was a charter member of the Okefenokee Golf Club and a former president of the club. He is survived by his wife, the former Miss Annie Laurie Walker, a son, Chester A. Witmer, Jr., Houston, Texas; a sister, Mrs. Horace E. Styer, North Hills, Pa., and an uncle, Dr. R. F. Anderson, Westchester, Pa. Funeral services were held at the residence, 501 Gilmore Street, Waycross, with the Rev. A. G. McInnis, pastor of the First Presbyterian Church and the Rev. Woodward Adam, pastor of the First Methodist Church officiating. Burial was in Lott Cemetery, Waycross.

## NEW DRUG, DEVELOPED SINCE WAR, ALLEVIATES MANY KINDS OF PAIN

A new drug, made available in this country after World War II, has been found effective in the alleviation of many kinds of pain, according to an article in the April 3 issue of *The Journal of the American Medical Association.*

The drug, which was given the non-proprietary name of methadon by the Council on Pharmacy and Chemistry of the American Medical Association, was originally prepared by German chemists and was known as drug 10820.

Writing in The Journal, Elizabeth B. Troxil, M.D., of the Department of Pharmacology of the University of Minnesota Medical School, says that in April 1946 clinical trials of the drug were instituted at the University of Minnesota Hospitals and that it was tried on 400 patients for relief of all types of pain.

Some of the conditions for which it was used to alleviate pain were: postsurgical, primary and metastatic cancer, arthritis, neuritis, headache, leg ulcer, anginal pain, and gastric duodenal ulcers.

The drug was administered orally—in capsules, tablets, and elixir—and by hypodermic and intravenous injection.

"Onset of action," the article says, "was two minutes when given intravenously, within 15 or 20 minutes when given hypodermically, or when given orally as

the elixir, and 30 minutes when given orally in capsules or tablets.

"By all routes of administration it was found that the average duration of action was from three to four hours, with many of the patients obtaining relief for as long as eight to 12 hours."

One group of investigators found in experiments carried out on animals that the new drug had some of the characteristics of both morphine and merperidine. The effects on the nervous, circulatory and respiratory systems were similar to those of morphine.

Other investigators found that methadon was more potent than either morphine or merperidine.

Still another observed the effects of methadon in former morphine addicts and found that the abstinence symptoms from morphine could be controlled with methadon. When methadon was withdrawn abruptly after prolonged administration, the symptoms were so mild that treatment was not necessary.

In the study carried out on the 400 patients, it was found that 81 per cent had adequate or complete relief of pain, and "this figure would be increased to 86 per cent if the group of patients who received methadon for labor pains were excluded, since the drug has proved to be ineffective in this type of pain."

Dr. Troxil says that it was possible to use methadon to relieve muscular spasm and pain in patients with bulbar and spinal poliomyelitis and that it also was used effectively to relieve headaches due to brain tumor, head injury and brain abscess.

Approximately 20 patients receiving methadon for two or three months had no withdrawal symptoms on abrupt discontinuation of treatment. Three patients were given the drug for one year and were able to stop treatment abruptly without ill effects.

## THE "UPSET" STOMACH

"Indigestion" is a common complaint, which sometimes takes long and careful study by a doctor of medicine to ascertain the cause, according to a HEALTH TALK of the Educational Committee of the Illinois State Medical Society.

In some persons, indigestion is caused by eating rapidly so that food is insufficiently chewed. In others, certain foods are not well accepted by the stomach, causing belching, distention or other discomfort. Spicy, highly-seasoned foods are especially likely to cause this reaction.

In many patients, however, indigestion is of nervous origin and traceable to an anxiety of some kind. These patients may belch frequently, complain of nausea and sometimes have difficulty in swallowing. Usually the patient blames some food, such as cucumbers, fish, garlic or cabbage. This type of indigestion may be accompanied with symptoms indicating nervous influences, such as palpitation, cold hands and feet, sweaty hands or unusual forms of headache.

Overwork, insufficient relaxation and haste in eating may all combine in a stomach "upset." Women, particularly, are inclined to bring too much emotion into household chores and to attach too much importance to trivial annoyances, and thus may develop such nervous indigestion.

Worry is a frequent factor. When the mind is disturbed, the processes of the body are often also affected. Tranquillity and mental poise are necessary to good physical health.

In some persons, indigestion is relieved if a mild or bland diet is followed, assuming that the basis for the anxiety is removed. The diet should consist of easily digestible foods which place no strain on the stomach.

If symptoms resembling indigestion develop and persist, however, the wise person will consult a physician. Distress signals such as belching, bloating, nausea, and a feeling of fullness even after a few mouthfuls of food might suggest more serious ailments as well as the mild indigestion. They may be the forerunner to an ulcer, for example, a condition which is far more difficult to cure than to prevent. The same symptoms may be a warning that cancer or one of certain heart conditions is present. The possibility that "indigestion" is really one of these diseases is the best reason why the habitual use of "antiacids" and other self-administered "bellyache" nostrums should not be used. They only veil symptoms and delay accurate diagnosis until too late.

The activity of the stomach is also related to anemia, or deficiency of red blood cells. Also, if the diet is inadequate in certain vitamins, the tendency to irritation and inflammation is greater. Then there may be disturbance of the secretion of the gastric juice in glands of the stomach wall; this juice breaks some foods down into their chemical constituents as part of the digestive process. These observations suggest that all stomach disturbances should be carefully studied by a competent physician.

The stomach and other organs making up the gastrointestinal tract form a mighty machine, but they can stand abuse just so long before sending out warning signals. Don't say "it's only indigestion." See your physician instead.

## SOCIALIZED MEDICINE WOULD HURT PATIENT, DOCTOR CLAIMS

Enactment of a compulsory sickness insurance law will in no way heal the medical economic problems in this country, Dr. Lowell S. Goin, of Los Angeles, says in the current issue of *Radiology*.

"We are almost the last great country in the world where medicine still remains a free enterprise and where it is not dominated by government-controlled agencies," Doctor Goin writes, adding:

"The health of the nation is not as bad as proponents of socialized medicine claim.

"The United States Public Health Service issued a report some time ago on the incidence of tuberculosis in the world. The United States has not had the benefits of compulsory sickness insurance; we are a benighted country where free enterprise still exists, but the incidence of tuberculosis in the United States is less than 25 per 100,000 of population. Great Britain has had compulsory sickness insurance since 1911 and, by strange coincidence, that country's incidence of tuberculosis is between 50 and 75 per 100,000, while in Germany, which has enjoyed these benefits since 1884, the incidence is given as between 75 and 100 per 100,000.

"Diphtheria is a good indicator, because it is a specific disease for which we have a specific treatment and, as a matter of fact, a disease from which no one needs to die. There are no secrets involved. German and English doctors know just about as much concerning diphtheria as we do, yet in the last year in which there are any comparable figures, the death rate from diphtheria in the United States was somewhat less than 4 per 100,000 of population, while in Germany it was 11.6 per 100,000 and in Great Britain it was 11.7 per 100,000 of population.

"In this instance, then, the panacea of compulsory health insurance seems to have failed slightly in its stated objective!

"The plain fact is that if you look at the experience in the world today, you will find that there is no place where the public health is as good as it is in this country; that in no other country has medical science advanced as much as it has in this country; that the European countries have lost their pre-eminence as educational centers; that the day when the American doctor strove vigorously to get to Germany or Vienna to advance his education has gone and, as a matter of fact, everyone abroad wants to come here to advance his education.

"The level of public health is lower in other countries than it is here; in most of them it is much lower. Compulsory sickness insurance in the United States is an extraordinarily poor way to give medical care."

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# PREOPERATIVE TREATMENT FOR GALLBLADDER SURGERY

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*LaGrange*

The preoperative treatment for gallbladder surgery resolves itself about three things: (1) The selection of patients, (2) diet; and (3) administration of medication. For convenience patients with gallbladder disease who come to surgery may be classified as follows:

1. Chronic Cholecystitis
   a. With stones.
   b. Without stones.
2. Acute Cholecystitis
   a. With stones.
   b. Without stones.

In the presence of stones there may be obstruction of the cystic or common ducts causing pain and, in the latter, giving rise to an obstructive type of jaundice.

Preoperative treatment is concerned primarily with patients with gallbladder disease of long standing, for it is with these patients that sufficient time has elapsed for damage to the liver to take place. However, it must be kept in mind that in acute cholecystitis there may have been present a chronic disease, but there is little that can be done in the way of preoperative treatment, because so little time can be given to it.

Because of the age group and the body type in which gallbladder disease is frequently found, complications are common. One of the most frequent, if not the most important, is coronary disease. Symptoms of gallbladder disease and coronary disease are often interrelated. And there is some evidence to support the theory that coronary disease, in some instances, is a reflex phenomenon set off by disease of the gallbladder. It has been observed that attacks of angina pectoris subside following removal of the gallbladder when definite gallbladder disease has been demonstrated.

The presence of diabetes mellitus that is not well regulated with diet alone makes gallbladder surgery contraindicated except in case of extreme emergency. Two of our deaths at the City-County Hospital, LaGrange, during the past ten years, have been diabetics. In these two instances it was impossible to stabilize the patient following surgery, and death resulted from diabetic coma.

There may be other abdominal conditions where gallbladder disease is of secondary importance, such as malignancies, partial perforated ulcers and adhesions, which markedly increase the risk of gallbladder surgery.

The condition of the liver bears a direct relationship with morbidity and mortality in gallbladder surgery. Damage to the liver is most apt to be present in the group in which the disease has been of long standing.

Is there an adequate test for liver function? Moses states that in the practical application of liver function tests there is no one test that is satisfactory, and it is not likely that there will ever be such a test. The reasons for this are many.

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One is that the functions of the liver are many and cover a wide scope and that no single test is apt to indicate all of these. Any one of these functions may be subnormal while others are normal. Another is that the liver is a very labile organ and dynamic changes in its function may take place over a short period of time.

The existing tests for liver function may not reveal slight variations from the normal, which nevertheless exist and are important in considering a patient for surgery:

1. The glucose tolerance test shows a fasting hypoglycemia and a prolonged hyperglycemia following the administration of glucose in hepatitis. The explanation of this is perhaps that the liver is unable to store glycogen and that it is also unable to convert the glucose circulating in the blood stream to glycogen as it normally does.

2. The galactose tolerance shows the same inability of the liver to convert glucose.

3. The cephalin-cholesterol flocculation test, normally negative, is positive in parenchymatous liver disease.

4. The prothrombin time is prolonged in obstructive jaundice, due to the inability of the gastro-intestinal tract to absorb the fat-soluble vitamin K.

We, at the City-County Hospital, ran a series of glucose tolerance tests before and after liver therapy in an attempt to determine if the glucose tolerance test could be used as a gauge for mild liver damage existing in chronic gallbladder disease. The results of these were inconclusive, or rather indicated that there was not a sufficient variation from the normal in the usual case to be of any value. It remains that there is but one way to know that liver damage is present in chronic gallbladder disease and that is to assume that it is present. We cannot expect to receive a report from the laboratory that this patient or that patient has liver damage, but must gain what information we can from the patient's history.

In all but the acute gallbladders there is ample time to treat the patients and prepare them, as well as possible, for surgery. A fat-free diet promotes better liver function. If the patient is brought into the hospital two weeks prior to surgery his diet can be carefully controlled. During that time he should be given a diet low in fat and high in protein and carbohydrate. It is impossible to adequately control a patient's diet at home. There are a great many patients who cannot resist the temptation to fudge a little on their diets, and while they are aware that it may give them indigestion they are not able to comprehend always the effect it may have on a damaged liver. It is wise perhaps to allow the patient to take as much of a gallbladder diet as he can tolerate well. Duration of the diet should be as long as possible, with two weeks as a minimum.

The most important medication is crude liver extract. The value of crude liver is difficult to overestimate. There is a factor, or perhaps factors, in crude liver that cannot be found in the purified form that exerts a beneficial effect on liver function. Advancement in biochemical research will perhaps change this in the future. Crude liver extract can be admnistered in the office in daily dosage as long as possible prior to operation but it should be given at least two weeks before operation, during the patient's hospitalization.

In obstructive jaundice, when surgery seems inevitable, vitamin K administered parenterally may reduce the prothrombin time to normal.

We feel that two weeks' hospitalization is advisable, not only for diet control and the administration of crude liver but the removal of patients from certain environ-

mental factors may promote better function of the autonomic nervous system and thereby be of definite benefit to the patient.

To summarize, I should like to restate the following points:

1. Patients with long standing gallbladder disease are apt to have sufficient liver damage to have a considerable effect on morbidity and mortality rates following gallbladder surgery.

2. That there is no adequate function test which will indicate mild liver damage, so that it is necessary for the surgeon to assume that it is present.

3. The administration of crude liver extract and the control of diet by a period of two weeks' hospitalization prior to surgery is advisable.


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## FUNCTIONAL DISTURBANCES OF THE LARGE BOWEL


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*Augusta*


An understanding of the condition which ensues when the normal physiologic processes of the colon are disturbed has been hindered by the confused terminology which has prevailed. The term "colitis" continues to be sadly misused and overworked. Numerous writers have pointed out that the origin of the word "colitis" is inflammation of the colon and that, in the syndrome under discussion, the colon is not inflamed. "Colitis" should be limited to those conditions in which actual inflammation of the colon can be demonstrated—the most common types being amebic colitis, chronic ulcerative colitis, and tuberculous colitis. "Irritable colon" is inadequate as it calls attention only to the colonic part of the disorder but it is preferable to the term "nervous indigestion," as this implies a psychoneurosis with predominantly gastric manifestations. Many of the patients are psychoneurotic but by no means all of them and all resent the implication of the term. I prefer "Functional bowel distress," suggested by Palmer, even though the term "functional" as applied to a disease is anomalous, for the normal bowel is functional.

Several factors may cause this disturbance in the neuromuscular mechanism of the colon and often-times more than one is operating in a given case. Usually the patient has an unstable nervous system which under the conditions of worry, stress, emotional states or fatique expresses itself in an imbalance of the autonomic control of the colon. Such local factors as the constant use of laxatives and enemas or a very bulky diet play an important role. Reflex factors such as disease of gallbladder or peptic ulcer may play a part. In an occasional person systemic disease, such as thyrotoxicosis or pulmonary tuberculosis may upset the neuromuscular mechanism of the colon. Ptosis and other anatomic abnormalities have little effect in this syndrome.

Regardless of the primary factors, the syndrome of *functional bowel distress* appears to be due to local neuromuscular disturbances causing hypertonicity and hyperirritability. The movements of the contents of the colon are affected by this resulting motor incoordination and it causes a more rapid emptying of the upper intestinal tract. This brings partially digested food into the

From the Division of Gastro-enterology, Department of Medicine, University of Georgia School of Medicine, Augusta
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colon, thus increasing the irritation and producing fermentation and flatulence. Scarlett has pointed out that "the tonus disturbance affects the sensory function, to cause sustained aching pain due to increased tension in the muscle fibers."

The absorption of fluid is usually affected and is almost always increased, producing the constipated "pebble stool". Further flatulence and constipation are due to the disturbed bacterial action on the cellulose bulk. Mucus may be increased as a result of the increased irritation of the mucous membrane.

The symptoms of disturbances of the colon are numerous and quite varied. Some of the most frequent complaints are belching, heartburn, distention, soreness, pain, anorexia, diarrhea, constipation, or alternating diarrhea and constipation. These symptoms, of course, are not diagnostic of irritability of the colon and may be the initial or persistent complaints of the patient with organic disease of the gastrointestional tract or other systems. The most common and persistent symptom of the patient with functional bowel distress is abdominal distress, which is usually described as pain. This varies from continuous aching to severe cramping pain. It is usually intermittent, often lower abdominal, but may occur in the upper quadrants or in the epigastrium. It is frequently shifting in character and moves from one point in the abdomen to another. The pain is frequently relieved by the passage of flatus or a bowel movement, but at other times a bowel movement will bring on the pain or make it worse. The distress frequently comes on within an hour after eating but in some cases the distress appears between 4 A. M. and 6 A. M. Food taking usually increases the distress but occasionally relieves the discomfort. Belching, distention, borborygmus, and excessive flatus are commonly complained of. Nausea is not an infrequent complaint, and vomiting occurs with slightly less frequency. These are commonly more severe in the early morning. Other symptoms complained of are subjective nervousness, palpitations, fatigability, headache, weakness and dizziness.

In every patient it is essential that a detailed description of the stool be obtained. Such terms as diarrhea and constipation cannot be taken literally because it is not uncommon to have a patient complain of constipation when they actually describe having two to three watery stools a day due to the taking of daily laxatives. The majority of the patients with functional bowel distress will describe some abnormality of the bowel function. The stools of these patients should be examined as to consistency, the form, the presence of mucus, and the presence of blood or pus. The latter are not seen unless local rectal lesions are present. Many patients complain of passing lead-pencil sized or ribbon-like stools and this is apparently due to spasm.

In addition to the symptomatology, there are two findings on abdominal examination that are important. The first is tenderness either in some part or along the whole course of the colon. In some patients there is generalized abdominal tenderness. The second finding is the palpation of a rope-like mass. This is more easily palpated in the region of the sigmoid but at times the entire colon may have this feel. The general physical examination may give clues to the sensitivity of the patient and the general reactions of the individual.

Since the symptomatology, which has been described, may be present with organic disease of the gastro-intestinal tract or elsewhere in the abdomen or in some other part of the body, the first task of the physician is to exclude organic disease. A careful history should be taken on every patient.

The physical examination should be done with great care and great detail. Because of the similarity of such syndromes as peptic ulcer, gallbladder colic or organic disease of the small and large bowel, it is essential that most patients receive detailed x-ray studies of the entire gastro-intestinal tract. Gallbladder visualization should be done on every patient with a history of typhoid fever and in most cases of patients past 40 years of age. In the younger age group the examination should be done as may be indicated. Stools should be examined routinely for blood, while the patient is on a meat-free diet, and for ova and parasites as indicated by the history. Sigmoidoscopic examination is important in ruling out neoplasms, early ulcerative colitis and amoebic dysentery. In functional bowel distress, the mucous membrane of the colon is normal but there may be spasm present.

Therapy should be directed at first making a correct diagnosis, and in order to do this it is necessary to consider the patient's physical, social and psychic background. In nearly all patients with functional bowel distress some psychotherapy is necessary. Palmer has suggested that in considering therapy for such a patient the physical factors present should be considered first; second, the social forces involved should be correctly estimated; third, adequate psychotherapy should be given; fourth, bowel rest should be promoted by giving a nonirritating diet; and fifth, physical rest should be promoted by giving the patient a more satisfactory daily program, by the use of sedatives, and finally the attainment of peace of mind. Failures in therapy occur in those patients who do not cooperate or for whom the program cannot be carried out because of external factors. When difficulties continue in a cooperative patient the cause usually lies in an unsolved psychiatric problem or in an impossible environmental situation. Physical and mental rest are of the utmost importance and every effort must be used to have the patient obtain this. If necessary sedatives must be used to assure the former. When possible, morning and afternoon rest periods are very helpful. Occasionally it may be necessary to have the patient obtain absolute bed rest for a few days, and in some cases for a few weeks.

Belladonna, as an extract or a tinctiure, is of value in helping to relieve the overactivity of the colon. Heat to the abdomen, such as sitting in a tub of hot water or the use of a heating pad, often gives great relief. Laxatives and lubricants should be eliminated but in the majority of the patients who are constipated the idea of the necessity of having a daily bowel movement must first be eliminated. Adequate bowel function can usually be restored by dietary means and every effort should be made to have the patient take a diet which is sufficiently laxative so that they have formed stools and yet not so laxative that the stools will be loose. In general, raw fruits and vegetables and other known irritating substances should be eliminated from the diet. In some patients it is necessary from time-to-time to aid the passage of the stool through the rectum and this may be helped by the taking of small oil or water enemas or the use of glycerine suppositories.

*Summary*

1. "Colitis" has long been misused in describing functional conditions of the colon. Terminology should convey no impression of disease of the colon to the patient.

2. Emotional disturbances and the constant use of laxatives and enemas play an important role in causing hypertonicity and hyperirritability of the colon.

3. Symptoms are not specific and diagnostic, and a diagnosis must be made by

excluding organic disease by all available means.

4. Therapy should be directed toward giving the patient adequate rest of body and mind by the use of sedatives and belladonna derivative drugs.

5. Bowel movements should be controlled by the use of diet. Difficult passage through the rectum may be aided by small oil or water enemas, or the use of glycerine suppositories.

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## PYLORIC OBSTRUCTION: A CORRELATION OF CLINICAL HISTORIES AND ROENTGEN OBSERVATIONS

ARTHUR G. SINGER, JR., M.D.
*Toccoa*

There are two types of pyloric obstruction which are to be distinguished. Acute functional obstruction occurs from spasm or edema or both. This type of obstruction is reversible, and the treatment is medical. Organic obstruction results from changes in the structure at the pylorus which are ordinarily not reversible, and the treatment is surgical. The discussion today will be limited to this second group.

No attempt is made here to present an exhaustive study of the subject. Observations from a group of cases which were studied roentgenologically and followed into the operating room will be presented, and the clinical histories will be given briefly. While the number of cases is not sufficient to permit definite statistical conclusions, one can compile enough information to allow some generalizations.

Pyloric obstruction due to structural changes is most frequent in the earlier weeks of life or after the forty-fifth year. The causes of this condition are varied, but, as one would expect, they are related to the age of the patient. Whatever the cause, the most common symptom is vomiting. Other symptoms which may be present are pain, loss of weight, anorexia, nausea, melena, distention, and inability to eat much at one time. The presence of pain inclines one to think of ulcer as the cause of the obstruction but does not exclude the diagnosis of carcinoma. Loss of weight does not give an indication of the etiology as it may occur with either an obstructing ulcer or with carcinoma. Not all the symptoms mentioned above are present in each case.

In the short series of cases reviewed, it was interesting to find that the seventh decade was the most common adult age group in which this condition was observed. There was no relation between the type of lesion and age or sex. The most frequent causes for obstruction were duodenal ulcer and gastric malignancy. These occurred with about equal frequency. Gastric ulcer was a less frequent cause. Other causes were seen, sometimes of an unusual nature, but they were not common.

The clinical diagnosis of pyloric obstruction is one which should be made only tentatively. Roentgen studies of the stomach are most helpful in establishing a definite diagnosis of obstruction, although the exact pathologic condition present cannot always be determined from the study. Early in the course of obstruction one sees intermittent, deep, vigorous peristalsis with some dilatation of the stomach. In later stages of obstruction, the stomach is dilated and there is retention of gastric contents; peristalsis is

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sluggish or absent, and there will be a high degree of barium retention after 24 hours. I believe it is well at this point to remark about a possible source of error in the study of gastro-intestinal cases in which the diagnosis is obscure. It is possible that a gallbladder will not be visualized in a case of gastric obstruction as the dye will fail to pass into the small intestine as it should. Because of this, one may make an erroneous diagnosis of gallbladder disease unless the stomach and duodenum are studied. This exact situation has come under my observation at least once, and the error was discovered when the patient himself asked that his stomach be studied.

It has been pointed out that obstruction is most common in the early weeks of life or after the forty-fifth year. Hypertrophic pyloric stenosis is the cause of most obstructions seen soon after birth. As you know, this is predominantly a condition of male babies and frequently occurs in the first born. It is known that heredity is a factor in the production of the condition which has its onset usually from the second to fifth week of life, with regurgitation at first and finally explosive, projectile vomiting. The absence of bile in the vomitus is significant as are the scanty stools, visible peristalic waves, and a palpable pyloric tumor. Roentgen examination in these infants shows dilatation of the stomach, intermittent hyperperistalsis, an elongated, narrowed pyloric canal, and a delay in the emptying of the stomach. This condition is illustrated in the first case, which was a five-week-old white male who had vomited in projectile fashion after each feeding for one week. The roentgen findings were those just described, and at operation hypertrophic pyloric stenosis was found.

Although not due to obstruction at the pylorus, the following condition must be differentiated from such an obstruction. Congenital veils across the duodenum may produce a picture must like that of hypertrophic pyloric stenosis. The presence of bile in the vomitus, however, will help in distinguishing the two. The second case is that of a two-year-old white female who had been vomiting for five days. The history showed that she had vomited frequently after birth and also a number of times in the month prior to the acute illness which resulted in her admission. Roentgen examination showed dilatation of the stomach and also the first and second parts of the duodenum, with obstruction at the second part of the duodenum, and a high degree of retention at eighteen hours. At operation a small band of adhesions across the second part of the duodenum was found.

The presence of a hypertrophied pylorus in adult life is not common. Its existence can be discovered however at times with the help of the x-ray. In this case of a 45-year-old white male, there was history of abdominal discomfort for the past six months, and ability to eat only a small amount at any one time. There was also a loss of 35 pounds during this six months. Roentgen examination showed a high degree of obstruction at the pylorus with cap indented and the impression was that of an organic lesion of the gastric antrum, possibly a new-growth. The surgeon found hypertrophy of the pylorus and this was confirmed by the pathologist.

As was stated, gastric ulcer is not so frequently a cause of pyloric obstruction as duodenal ulcer or carcinoma of the antrum. In the following case a gastric ulcer produced obstruction by a rather unusual mechanism. The patient was a 59-year-old white male who had been operated on for a perforated gastric ulcer two years previously. In the recent past he had suffered from colicky epigastric pain, a loss of weight of ten pounds, some vomiting, and a

loss of appetite. X-ray examination demonstrated a marked degree of pyloric obstruction although the stomach was not greatly dilated. The cause of the obstruction was not diagnosed from the study. At operation there was a penetrating ulcer of the lesser curvature of the stomach which was adherent to the liver and caused an obstruction by producing torsion of the stomach. The pylorus itself was patent.

At times one can follow the development of an obstruction as was seen in this case of a white female aged 64 who complained of pain and vomiting for four weeks. The first roentgen study did not give evidence of obstruction. The vomiting continued and a second study was requested. At this time, one week later, there was definite obstruction, and a defect in the antrum was noted. At operation this proved to be a prepyloric ulcer extending into the pylorus, which was thickened.

Duodenal ulcer has frequently been considered the most common cause of obstruction at the pylorus, although in this small series gastric malignancy appeared with equal frequency as a cause. About 2 per cent of duodenal ulcers produce this type of obstruction. In the following case of a 60-year-old white male there was a history of ulcer dating back 32 years. The diagnosis was confirmed by x-ray and a slight degree of obstruction was diagnosed because of the increased peristalsis. At operation a large ulcer just distal to the pylorus was found.

The possibility of an ulcer causing obstruction and complicating an unrelated condition occasionally develops. A 62-year-old white female was admitted to the hospital because of a fracture of the femoral neck. There was no particular gastro-intestinal complaints until the patient developed marked distention, vomiting and melena. This roentgen study was done at the bedside and showed a gas containing pocket with a fluid level, and also distention of a loop of small bowel. At operation a duodenal ulcer was found. It was responsible for the obstruction.

In rare cases a condition entirely outside the stomach and duodenum may cause pyloric obstruction. In this case a 61-year-old white male who had noticed loss of weight and appetite associated with nausea for several months, was examined and found to have a high degree of pyloric obstruction. He refused operation and left the hospital. Ten months later he was readmitted still with a high degree of pyloric obstruction. The duration of the condition raised doubt concerning the diagnosis of carcinoma of the antrum. At operation a badly diseased gallbladder containing stones was found and the omentum was adherent to the gallbladder and across the pylorus causing the obstruction.

Gastric carcinoma may produce obstruction when there is involvement of the prepyloric region. This is illustrated by this case of a white female aged 49 who complained of belching and burning after her meals, and who had vomited all food during the two weeks prior to admission. The gastric acidity was unusually high in this case. She was x-rayed on three different occasions. The first time a high degree of pyloric obstruction was reported. After a short period of medical management, she was re-examined and apparently there was improvement as the retention was greatly diminished. Actually this seeming improvement resulted from the zealous efforts of a student nurse who passed a Levine tube and evacuated most of the stomach contents before the 24-hour study was done on the second examination. Subsequently a third roentgen study showed there was no change in the obstruction, and the patient was operated on. Carcinoma, infiltrating the

pylorus but not completely annular in character, was found.

In this final case I am showing the slides in chronologically reverse order. These studies were made on a 69-year-old Negro male who had vomited for two weeks prior to his first admission. He had also complained of melena and a mass in the epigastrium. Examination of the film now being projected would lead one to think that the patient was one with a subtotal gastric resection. Actually this one was made six months after a palliative gastroenterostomy had been done for an annular carcinoma of the antrum producing a marked obstruction, as you will see on the next slide. I show this because there is at times discussion of the value of an operation of this type. This man was given several months of fairly comfortable life, and died soon after from metastases rather than from starvation.

*Summary*

In infancy hypertrophy of the pylorus is the commonest cause of pyloric obstruction. It may be simulated occasionally by congenital veils obstructing the duodenum. Hypertrophy of the pylorus may also occur rarely in adults. Duodenal ulcer and carcinoma of the antrum are the common causes of pyloric obstruction in adult life. Less frequently gastric ulcers will lead to obstruction, and occasionally an unusual extrinsic lesion will produce this picture. Although no case of prolapsing gastric mucosa has been presented, it too should be mentioned as a cause of pyloric obstruction.

The management of pyloric obstruction is resolved into the medical and surgical. Some cases will yield to medical treatment and this will be confirmed by re-examination after a short period. Failure of medical treatment will also be demonstrated at this time and surgical procedure is then indicated.

# POLYPS OF THE COLON—THEIR ORIGIN AND GROWTH

John S. Atwater, M.D.
*Atlanta*

*Historical Aspect*

It is difficult to find the earliest recorded accounts of intestinal polyps. There is no doubt that polypoid disease of the intestine existed among the ancients but, as Ralph H. Major in his *Classic Descriptions of Disease* points out, the early descriptions are so grossly inaccurate that they serve only to confuse one. Like so many other things, the real interest in this field did not arise until the general re-awakening, the Renaissance, occurred. Since then there has been an ever increasing literature on the subject of intestinal polyps.

The modern knowledge of polyps came in 1721 when Menzel described evidences of a number of wart-like excrescences arising from a colonic mucous membrane that showed evidence of marked inflammation. This first recorded instance occurred in a soldier who died from a chronic dysentery. Most readers have accepted the fact that Menzel's case was supposed to originate on an inflammatory basis although one author, Coffey, feels it was on an hereditary basis. While other investigators such as Wagner (1832), Lebert (1861), Luschka (1861), and Virchow (1863), gave good descriptions of the gross and microscopic appearance of polyps, it was not until 1881 that Woodward made clear for the first time the differentiation between primary polyps and those that were secondary to chronic ulcerative colitis. The latter he named pseudo-polyps.

Cripps in 1882 also reported two in-

From the offices of Drs. Hal Davison, Raymond Arp and John S. Atwater.

Read before the Medical Association of Georgia, Atlanta, April 28, 1948.

stances, in a brother and a sister, of multiple polyposis of the colon associated with an hereditary factory. The brother, at the age of nine, had a bloody diarrhea and a prolapse of a polyp from the rectum. The polyp was successfully removed with symptomatic relief. This was repeated three times and at the age of 15 years; Cripps examined this patient with a duckbilled speculum and reported the presence of sessile and pedunculated polyps as far as he could see or reach into the rectal canal. One of these polyps was removed and showed that the epithelium was largely of the columnar type. He emphasized the presence of connective tissue. He felt that the small round cells seen were lymphoid cells and that the cells were indistinguishable from the glandular epithelium and so concluded that lymphoid cells may originate from glandular epithelium.

Although Cripps did not mention malignancy, he pointed out that in certain areas of the glandular epithelium the cells lose their tall columnar character and become circular and larger and then often contained several nuclei. In view of our later findings, we might wonder if he were not describing changes such as are seen in very low grade adenocarcinomas.

Many other contributions have been made, but the literature is too vast for review herein.

### *Role of Irritation*

Much argument has been centered about the role of irritation in polyp formation. Certainly this is founded on logical observations. Many polyps do exist in which there is some evidence of inflammation, but it should be pointed out that the inflammatory reaction could be of secondary origin. The pressure of the tumor, a foreign body response, local intrapolyp necrosis or death of the surrounding tissues and the absorption of the products of tumor growth, all may call forth an inflammatory reaction.

All types of irritants have been accused of causing polyp growth. Lebert advanced the idea that bacteria and feces were the irritants. Schwab and others advocated constipation as the causative factor, but Shedden to his satisfaction discredits constipation by stating that the incidence of constipation surpasses the incidence of cancer of the rectum so vastly that a causal relationship seems unlikely. On the other hand, it seems obvious that irritants, working through the medium of constipation, would exert their most severe irritation at the fixed portions of the bowel, such as at the cecum, the flexures and the rectal valves and in these locations the majority of polyps and cancers are found. Zinner stated that 75 per cent of rectal cancers arise on the anterior wall of the rectum. This, he attributes, to the pressure of the passing fecal current on the mucous membrane against the prostate.

Certain writers have suggested that several factors play a role in polyp formation. Verse stated that chronic irritation acting in the presence of a congenital predisposition was responsible. Feyrter admitted the need for a congenital predisposition and stated that the stimulus for growth came as a result of local katabolism.

Virchow reasoned that the origin of polyps lay in a hyperplastic response to irritation. Rokitansky supported a similar view. These observers apparently saw only the pseudopolyps that arise following dysentery or ulcerative colitis. Bargen has shown that there is a definite relationship between reparative healing and polyp formation.

One can scarcely overlook the possible role of parasites as causative or accessory agents in polyp formation. By feeding rats cockroaches infested with spiroptera, or by

feeding rats the excreta of other rats infested with spiroptera, Fibiger was able to produce gastric polyps in 12 of 62 rats. In two rats these lesions became malignant and metastasized to the lungs. Fibiger reported primarily a chronic inflammation of the stomach, then a profuse papillary growth of the mucosa with some local invasion. The primary lesions were said to show the presence of the parasites where the metastases did not. Broders observed the microscopic sections of these tumors in 1939 in Copenhagen and was satisfied that these were true cancers. Clinically, the presence of Bilharzia, oxyuriasis and schistosomes have been reported as found in the base of polyps sufficiently often to suggest a causal relationship.

The experimental field led the way to the irritative concept. Genekin and Dmitruk produced polyps in rabbits by painting their appendices with tar. Likewise, other workers (Hoelzel and DaCosta-1937) fed rats a diet in which there was much inert material as kaolin, cellulose and talc. The rats so treated developed intestinal polyps in 34 per cent of 250 cases. The authors suggested that this was due to the intestinal stasis together with fecal contamination and the production of suction or traction on the intestinal walls. Interestingly, in 90 per cent of their animals, the diet produced bloody stools.

This occurrence brings to mind the work of Menetrier who, in writing of gastric polyposis, described two types of polyps. One was called *polyadenomes polypeux*. These consisted of discrete polyps with individual attachments that were either sessile or pediculate. In the other type, *polyadenomes en nappe*, the polyps arose from a common thickened plaque-like base in which the glands were in orderly rows, but were increased in size by five or six times. Menetrier expressed the idea that in these instances, polyps were of an inflammatory origin since often there was an associated gastritis. Robertson also commented on the frequent occurrence of inflammatory change in the gastric mucosa in connection with cancer of the stomach.

Fansler in 1930 stated that adenomas begin as an enlargement of small submucosal lymph follicles. He was not willing to state what excited the follicle to growth. Later more will be said relative to the role of the lymphatic system.

Robertson has pointed out that the stimulus for growth that so many authors discuss is an erroneous conception. He has pointed out that in artificial tissue culture under suitable conditions, cells will grow indefinitely. He concludes that this is a concrete demonstration that living cells already possess the property of independent proliferation. The importance of this fact lies not in the stimulation for growth, but in the loss of the mechanics for orderliness of growth such as occurs in cancer. He suggested that such a mechanism must be an inhibitory one.

To quote Robertson further in an oft-referred to illustration, when a wound heals the injured tissue proliferates to complete repair and then slows down or ceases. Why does the proliferation not continue to produce a malignant tumor? It would seem to be because of this inhibitory mechanism that controls the orderliness of growth.

### *Pathogenesis*

Dukes, in discussing the pathogenesis of intestinal polyps, emphasized that his conception of tumor formation is based on the supposition that the only operative factor is a more lively multiplication of epithelial cells within a defined area. He is opposed to the view that adenomas owe their origin to some submucosal structure such as a lymph follicle bulging the secretory cells

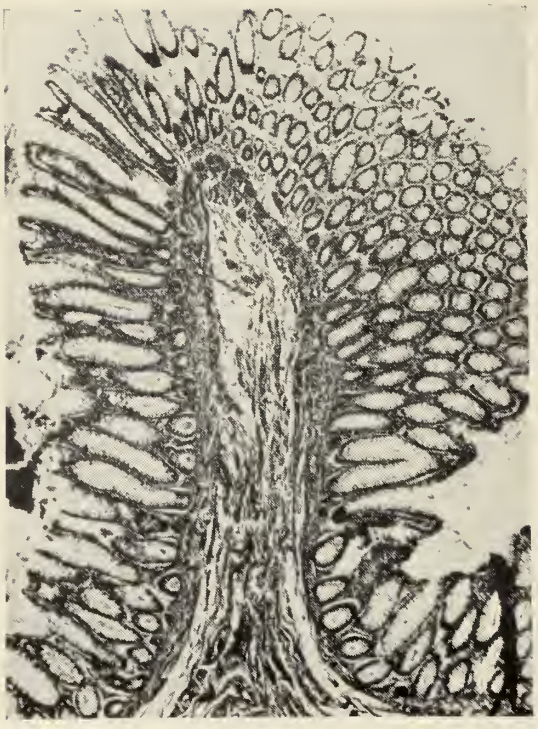


Figure 1a
Normal fold of rectosigmoidal tissue: orderliness and uniformity of growth are evident (x35).

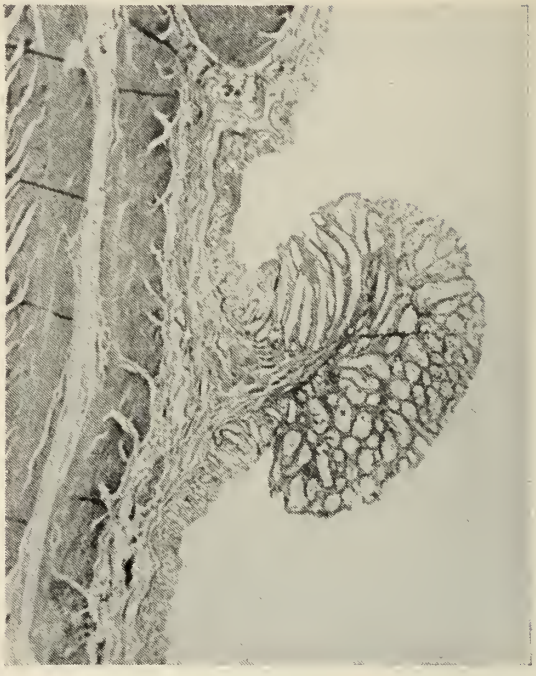


Figure 1b
Benign polyp. The lengthened glands with deepened crypts, plentiful goblet cells, uniform staining and orderliness of arrangement may be noted (x13).

into the lumen of the gut. From his work he is unable to find evidence to support the lymph follicle idea. In addition, although he admits that chronic inflammation may play a role, yet there is no imprint that he can recognize in his specimens of such a process.

He presents a series of drawings which represent schematically the changes from normal to polyp. Initially, the glands are essentially of the same length, the crypts of Lieberkuhn are equally deep, and the lining cells are essentially identical. Something then occurs, or makes possible, a more lively growth of glandular epithelium. This leads to a mechanical lengthening of the glands and a deepening of the crypts. This is called simple epithelial hyperplasia.

With the continuation of this process there is further lengthening and soon associated branching of the glands occurs. To provide a more extensive base for the developing underlying structure there occurs a bending of the bowel wall, particularly the mucosal layer, toward the gut lumen. This bend increases the available supporting tissue in the same proportion that any circular distance between two fixed points increases such a distance as opposed to the straight or shortest distance between identical points. This bending is at some cost to the adjacent hyperplastic glands along the boundaries of the growth. The cells tend to become stunted and compressed at such points. Such a process may continue on to the point of pedunculation. Dukes has called attention to the stunted growth at the fixed points, which are irritated constantly and may give rise to a secondary growth. Should the rate of glandular epithelial proliferation be over an area too great to be compensated for by a projecting growth alone, there is apt to be an infolding of the mucosa. It is about this infolding that the normal lymphoid tissue is increased and the lymph follicles may become more conspicuous.

Another theory of pathogenesis was out-



Figure 1c
Higher magnification of an area shown in figure 1b. Resemblance of glands and epithelium to normal may be noted. Nuclei lie in close approximation to the basement membrane (x340).



Figure 1d
Benign polyp. Contrast hypertropied lengthened glands comprising the mammillation with adjacent normal mucosa. This represents one of the earliest changes seen (x16).

lined by Cromar several years ago. It was observed that colonic cancer recurred following excision more often than expectations would allow in view of the fact that the cancer was thought to have been completely removed and no known metastasis nor local invasion was thought to have occurred. To investigate why this occurred, a study of the mucosa of the adjacent area to the cancer was made.

Tiny mamillations of one to four millimeters in size were observed, usually with the hand lens, as far as 15 cm. away from the cancer. On microscopic examination these proved to be small adenomatous structures. It was noted that there was also an abundance of lymphoid tissue present in these areas.

In 16 of 100 normal, healthy colons, Cromar found that the lymphoid cells had made large enough lymphoid aggregations to disrupt the continuity of the muscularis mucosa. In 29 of the 30 cases of colonic cancer he found that lymphoid aggregations had disrupted the mucosa. The remaining case was one in which the cancer had arisen from a diverticulum.

Under pathologic circumstances Cromar thought that these lymph follicles might become encapsulated and develop secondary centers. In some instances these follicles became so large that they disrupted the continuity of the mucosal surface as well as the muscularis mucosa. When this happened or when they were particularly large, there was noted an irregular epithelial proliferation overlying the follicle. In this proliferating area atypical gland and cyst formation were frequently found.

Certain of these follicles ruptured toward the gut lumen with a resultant prolapse of the epithelium into the substance of the follicle. This formed a so-called Schultze pattern. Often there was a tendency for these ruptured follicles to heal over, thereby entrapping the already atypical glands deep in the healing mucosa and submucosa.



Figure 2a

Formation similar to that shown in figure 1b, except that along the surface of the intestine the epithelium has changed. It forms an "icing" of differently staining glands (x18).



Figure 2b

The "icing" has replaced the normal epithelium down to the muscularis mucosa. The cells stain more deeply. The glands are longer and tend to be irregular in outline. Production of mucus is not striking (x13).

Occasionally certain of these entrapped areas were found surrounded by several lymph follicles. These follicles, by disrupting the muscularis mucosa, tended to "peg-down" this atypical isolated glandular area to the submucosa. Subsequent contraction of the remaining muscularis with the approximation of the surrounding follicles was thought to cause the small glandular area to be pushed toward the lumen as an elevation. Thus, was said to be formed the earliest stage of a polyp.

The tug of the passing fecal stream tended to elongate this structure. The lymphoid tissue at the bases gradually was said to be replaced by fibroblasts to form a fibrous core and thus a polyp grew.

Cromar emphasized that this might be one, but not the only way for polyps to be formed. He stated that these changes preceded the formation of the polyps arising on an inflammatory basis and differed in degree only from the changes seen in other diseases such colitis. He also felt that diffuse polyposis was due to a congenital error of epithelial development.

It was thought that these areas were "potentially malignant" ones. The separation and isolation of these glands from their normal place was thought to be conducive to altered nutrition. MacCarty was cited as having previously called attention to local starvation as a primary factor in migratory hyperplasia.

Ewing has summarized the histogenesis of cancer of the intestines and of ordinary benign intestinal polyps, by stating that the transition in the early stages as described for one was essentially the same as for the other. Hauser, Verse, Westhues and Schmieden and many others have attempted to trace these changes. In general, it may be said that these authors have found tumors arising from circumscribed areas of mucosa in which the glands became enlarged, the lining cells hypertrophied and multiplied, the production of mucus increased and the lumina of the glands elon-

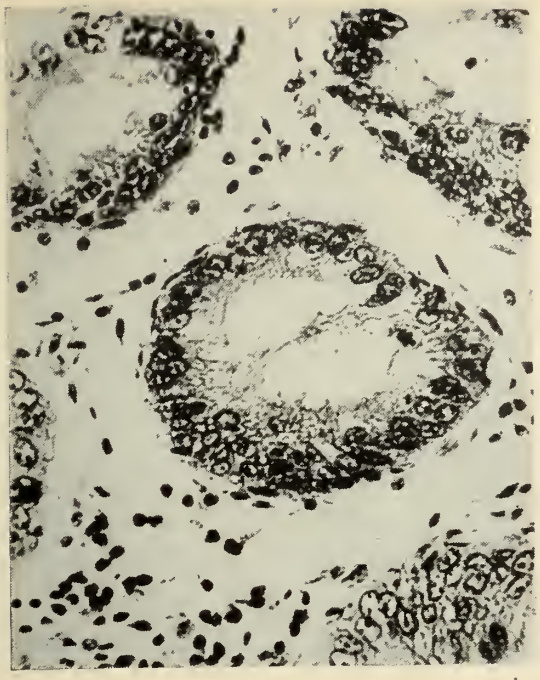


Figure 2c
Higher magnification of an area shown in figure 2b. Changes should be contrasted with figure 1a. The cells are beginning to pile on each other. Many nuclei have moved away from the basement membrane and tend to be vesicular and irregularly shaped. The boundaries between the individual cells are indistinct. Production of mucus is meager. Mitotic figures are more evident (x340).



Figure 2d
The lengthening of the individual glands is displayed together with the changes noted in figure 2b (x21).

gated and bifurcated. Manifestly, this represents a minor thickening of the mucosa. Due to the tug of the passing fecal stream and the action of peristalsis, the projection becomes elongated, tending to pull its submucosa with it, forming the earliest type of pedicle. Further changes are summarized as being mechanical exaggerations of this.

*Relationship of Polyps to Malignancy*

Opinion is greatly diversified regarding the relationship of polyps to malignancy. The time-honored classification divides polyps into benign or malignant ones. There seems to be little argument about the larger ones being malignant. Grossly, they are recognized as carcinomatous. However, there is a large group of smaller polyps wherein gross inspection and even histologic inspection fails to give an immediate answer.

In general, there are two major divisions of opinion on this point. One holds that there is no such thing as a benign polyp; the other contends that benign polyps exist, but undergo malignant change or degeneration.

In 1860 Virchow stated that "cancer is not malignant because it contains heterologous cells, nor is chancroid benignant because its cells are homologous. They are both malignant and their malignancy only differs in degree." This view would satisfy the first school of thought, for thus the so-called benign polyp would represent one stage in a series of changes, the ultimate of which we recognize as cancer. Robertson has expressed this view when he stated that neoplasia *per se* means malignancy. It may take years for the recognizable malignancy to make itself evident, but, fundamentally, the adenomatous polyp is malignant from the very beginning. Parenthetically, it might be added that such a view makes the use of the word "adenomatous" somewhat contradictory, for the term "adenoma" implies benignancy.

The exponents of the other school may

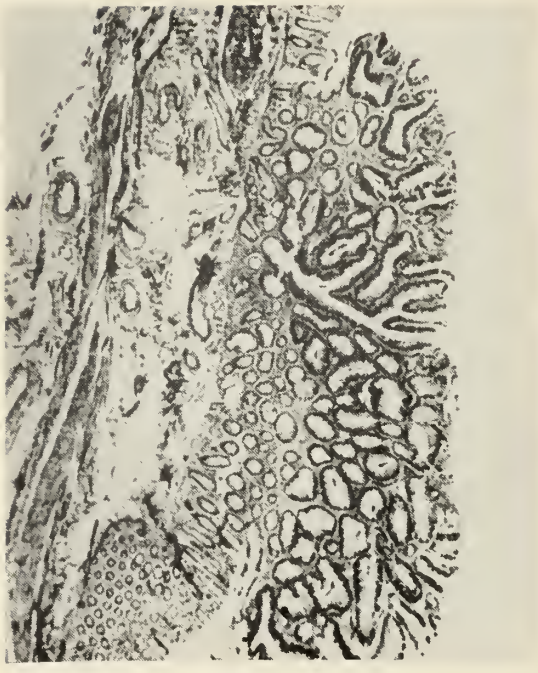


Figure 3a
Deeper staining of polyp as contrasted with neighboring normal epithelium; branching of glands and enlarged irregular alveoli (x15).

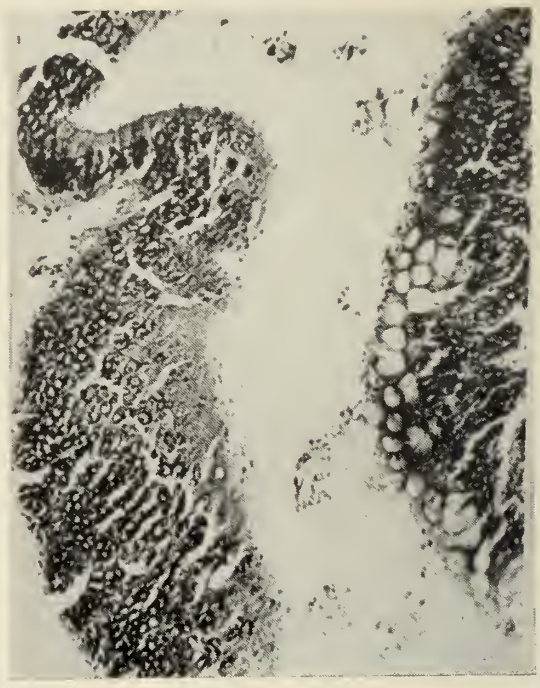


Figure 3b
Higher magnification of an area shown in figure 3a. Cells have lost their individuality, nuclei are heaped on each other and are irregular in shape. Irregularity of chromatin is present; some nuclei are vesicular while others stain black. Nuclei have moved farther away from the basement membrane in figure 2c. Production of mucus is minimal (x220).

be divided into first, those who rely on the invasion of the basement membrane as the criterion of malignancy, secondly those who prefer invasion of the basement membrane but who will admit malignancy by virtue of cellular changes, and lastly, there are those who base their concept of malignancy almost entirely on cellular changes.

David stated that the most important histologic evidence of malignancy is the destructive invasion of the basement membrane and the muscularis mucosa. Ewing has described the histogenesis of benign adenomas and of cancer simultaneously, at least in the earlier stages. The significant point in differentiating benign from malignant adenoma arises when the neoplastic alveoli break through the muscularis mucosa and extend into the submucosa.

Saint has called attention to the opinions of Quenu and Landel and of Broders, who have stated that the existence of the basement membrane in ordinary benign polyps is an inconstant feature. Here it may be demonstrated and then again not, regardless of the changes, or absence of changes, in the overlying glandular epithelium. If this be true, certainly this criterion of malignancy stands on unsteady grounds.

The importance of cytologic changes as determining the presence of malignancy has had an increasingly important role. MacCarty called attention to it years ago. Broders elaborated on it and set up the somewhat arbitrary, but nevertheless useful, gradings of malignancy depending on the ability of the cells to produce a growth like the normal. The more like the normal, the higher degree of cellular differentiation; the less like the normal, the more the cellular dedifferentiation.

Feyrter studied some 1017 polyps discovered at routine autopsy. He stated that in his experience there is no way in which he can differentiate between epithelial hyperplasia and adenoma formation. He mentions many cellular changes, such as in-



Figure 3c
The epithelial change at the tip of a long fold. Nearby is a fold without the epithelial change. Attention is called to the blacker staining of the area of change and the decrease in number of goblet cells in that area (x17).

creases in the number of layers of epithelial cells, changes in the height of the cells, heavier staining of the protoplasm of the epithelial cells with the acid stains and the indefinite boundaries between the cells. These changes can be observed but he has felt that they are indefinite criteria from which to draw conclusions.

On the other hand, Westhues believed that the malignant tendency can be determined by the spacing of the cells, by the relationship of the nucleus to the membrana propria, by the tendency toward layering of the epithelial cells with darkened nuclei, by the lack of order of the tubules and by the tendency for branching to occur. He has felt that the respect for the muscularis mucosa is not infallible and that dedifferentiation is, by far, the most important.

This is in direct contrast with Feyrter's belief as previously described, for he held that cellular changes are less important whereas respect for the muscularis was of great import. He would lead one to believe that there are three types of hyperplasia. First, there is a hyperplasia that remains as such; secondly, a hyperplasia that leads to adenoma; and thirdly, hyperplasia that leads to cancer.

Other observers, as Swinton and Warren,



Figure 4a
Pedunculated polyp: mucosa is normal along the base and area adjacent to polyp. The height, regularity, staining characteristics and mucus production of the normal mucosa should be contrasted with that of polyp. Changes illustrated in figures 1, 2 and 3 exist here in exaggerated form.

recognized the importance of several factors. Their criteria for malignancy are the anaplastic character of the cells, the irregularity of the glandular structure and the invasion of the muscularis mucosa and basement membrane.

As mentioned previously, Cromar felt that there exist potentially malignant areas in the bowel. By the steps which he described, the cells which are entrapped in the healing ulcers of the ruptured lymph follicle are carried away from their normal source of nutrition. This factor of local starvation, he believed, was conducive to secondary cytoplasia, and thus malignancy.

The transitionalists would point eagerly to the many cases such as the one described by Manheim and Druckerman. In this instance a known "cherry-sized" polyp was present and observed in the sigmoid of a patient for ten years. By the way of the proctoscope a biopsy was taken and reported by the pathologist as a benign adenoma. Eight weeks after the biopsy was taken,

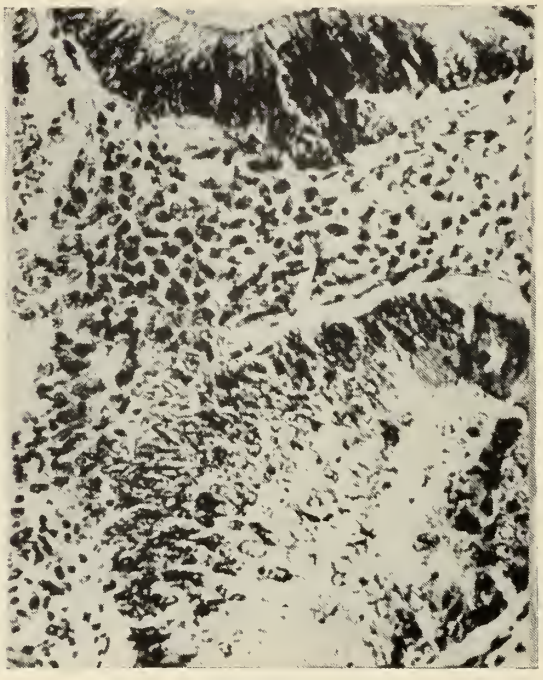


Figure 4b
Higher magnification of an area in figure 4a. Normal appearing mucosa is absent. The nuclei form a heterologous mass. They have disregarded the normal basement membrane and are seen streaming into the glandular interstices (x220).

symptoms led to further examination and the polyp was now unmistakably carcinomatous.

Often has it been stated that the site from which the biopsy was taken makes considerable difference in whether it is considered benign or malignant. Some have advocated taking the biopsy from the base of the polyp, as Swinton and Warren and David did. Others suggest that since the changes are usually observed at the periphery, the edge of the polyp is the ideal site of biopsy. This was suggested by Saint years ago. The dictum of the late Professor Dean Lewis regarding biopsy in breast lesions applicable to polyp biopsies. He would state emphatically that there was no such thing as a satisfactory simple biopsy of the breast; one must remove the entire breast to determine the presence of cancer. Likewise, there is no universally satisfactory polyp biopsy. One must remove the polyp together with its stalk and base. Multiple sections may need to be studied



Figure 4c
More extensive change may be noted in this polyp with two polypoid divisions (x11).

before stating that a benign condition exists. It is likely that in most instances one will not find simply a benign polyp. This is an important argument for the prompt surgical removal of any polyp of the colon, whether sessile or pedunculated.

*Method of Study*

The material presented here was selected from the records of the Department of Pathologic Anatomy of one of our larger university centers, the Mayo Foundation, during a four-month period. There were 24 consecutive autopsies performed during this period. At each examination the entire colon was placed in Kaiserling's No. 1 Solution. Several days later the colon was examined with a magnifying hand lens. Any area suggesting a change from the normal, including tiny mamillations, was cut. Tissues were taken from all polyps and from all anatomic portions of the colon in which no abnormalities were suspected. The tissues were prepared in the manner used in a standard laboratory and were stained with hematoxylin-eosin stain.

The tissues studied were divided into two groups: the control and the polyp group. The controls were further subdivided into pure and impure controls. The pure controls represented sections taken from colons in which no abnormality could be recog-

nized. The impure, from colons harboring polyps but from areas which appeared normal. The polyps were divided into benign and malignant ones and further subdivided as to their morphologic nature; that is, whether they were sessile or pediculate.

There were 75 "pure controls" and 53 "impure controls" observed. The benign polyp cases numbered 39, almost all of which had the sessile form. Seventy-four malignant polyps, of which 43 were sessile and 31 pediculate were observed.

The Oxford Dictionary states that "polypus is a general term for tumors of various kinds, arising from a mucous or serous surface, usually pedunculated, and having ramifications like the tentacles of a polyp." Basically, the word "polypus" is derived from the Latin, and means "cuttlefish".

In this study any structure protruding in an abnormal fashion above the normal mucosa, sessile or pediculate and having a glandular character, was considered a polyp. No instance of fibroma, myxoma, hemangioma, hymphangioma, lipoma or other benign tumor was included.

*Selected Factors of Epithelial Change*

The following is a list of the selected factors of epithelial change that were considered in this study:

1. Thickened mucosa.
2. Elongated gland.
3. Branched glands.
4. Cystic glands.
5. Irregular alveoli.
6. Height of cells.
   a. Columnar.
   b. Cuboid.
7. Layering of cells.
8. Staining characteristics (H. & E.).
9. Increased mitotic figures.
10. Basement membrane: nuclear relationship.
11. Production of mucus.
12. Area of greatest epithelial change.
13. Disruption of basement membrane.
14. Disruption of muscularis mucosa.

The earliest changes in the development of polyps has been stated by some investigators to be a simple multiplication of the cellular epithelial component with resultant glandular hypertrophy. As noted previously, Dukes presented this concept very ably with excellent schematic drawings. The epithelial changes have been mentioned by many authors and attempts to trace these changes have been made largely by foreign workers.

A thickening in the mucosa due to an elongation of the glands of Lieberkuhn was found in the polyp. Sixty-five per cent of the malignant polyps showed that those glands were no longer found to extend directly from the muscularis mucosa to the bowel lumen, but they became branched. The degree of ramification of these branches was relative to the grade of malignancy present. The higher the malignancy, the greater the branching of the glands. It was only occasionally that a control section showed such a change. Of the benign polyp series only a small number, 8.8 per cent, showed branching, but all showed a thickening of the mucosa with elongated glands.

The glands became enlarged and the alveolar lumina often approached cystic dimensions in many instances. Of the malignant polyps 72 per cent and of the benign polyps 42 per cent showed such a change as contrasted with only occasional examples in the controls. The gland outline displayed irregularity in the malignant polyps in most instances, whereas only 38 per cent of the benign polyps showed any such change to be present.

Atypical epithelium, overlying a lymph follicle, occurred in from 13 to 17 per cent of all cases of polyps. It is interesting to note that it occurred three times more frequently in the presence of polyps than in controls.

Whereas, almost all controls stained normally with the hematoxylin-eosin stain, there was wide variation in the staining of polyps. Some polyps stained lighter, and

others heavier than normal. Of the malignant polyps, 91 per cent displayed a staining different from normal; 82 per cent of these staining heavier. Of the benign polyp group, two-thirds stained normally, and of this group approximately one-fourth stained more heavily than usual. There was a progressive change in the cellular character from the normal controls, to the benign polyps, to the malignant polyps. An increase in irregularity in shape of the cells, and a lessening in height with the gradual assuming of a cuboidal shape was noted. The cells were seen to heap themselves upon each other in a disorderly layered fashion. Mitotic figures were recognized far more frequently in the change of the tissue toward malignancy.

The normal cell has its nucleus in a position in close approximation to the base of the cell. In the control study this was true. In the cases of benign polyps, the nucleus was in normal position in only one-third of instances. In the sessile malignant polyps, in only one-tenth of the cases it was uncommon to find the nucleus in a normal position in the pedunculated malignant polyps.

Using a grading system of 1 to 4 in which grade 1 represents the least change and grade 4 the greatest, it was found that 63 per cent of all malignant polyps showed an elevation of the nucleus to the degree of grade 1. Whereas an elevation of grade 2 did occur in 4 per cent of benign polyps, there was an elevation of grade 2 to 3 in one-half of the malignant polyp cases.

Mucus production was decreased in three-quarters of the malignant polyps and in one-third of the benign polyps. Appropriate mucin stains corroborated this finding.

In confirmation of the previous work of Saint and others, it was found that the greatest epithelial change occurred most frequently in the peripheral portions of the polyps.

### *Diverticulosis and Polyps*

In association with the study of the pathogenesis of intestinal polyps, observations were made on the occurrence of diverticulosis coli. Of the 241 cases studied, diverticula were found in 15.7 per cent of cases. The general incidence of diverticulosis varies considerably as reported by various authors. Edwards, in reporting 2139 examinations by x-ray, states an incidence of 16.08 per cent in patients over 35 years of age. W. J. Mayo stated that in people over 40 years of age, 5 per cent had this condition. His figures were based on necropsy reports. Rankin and Brown found an incidence of 5 per cent also from x-ray examinations. Ochsner and Bargen concede the incidence to be less than 7 per cent of the general population. In the current study the general incidence of 15.7 per cent agrees most closely with the figures of Edwards.

The occurrence of diverticulosis coli and colonic polyps was similar. In the presence of polyps, diverticula occurred in 14.2 per cent of cases. In the pure controls this condition was seen in 14.6 per cent of cases. In no instance was a polyp found to arise from a diverticulum. The diverticulosis was present either in the same or in other anatomic segments of the colon.

This incidence is in keeping with the many opinions noted in the literature. However, opinion has been at variance regarding the significance of these two conditions when they occur together. Fifield, Spriggs, Marxer, and Erdmann have felt that the relationship is a casual one. W. J. Mayo at one time stated that diverticulitis predisposed to malignancy but later rejected this view and felt that the relationship was casual. On the other hand, McGrath has stated that new-growth occurred in 25.6 per cent of cases of

diverticulitis. Edwards has found diverticula in 5.6 per cent of cases of newgrowth. No diverticulitis was noted to be present. Ochsner and Bargen published an incidence of diverticulitis in malignancy as 6 per cent. Lawrence found only 22 cases of diverticulosis in 166 cases of colonic polyp, or an incidence of 13.2 per cent.

From this study it may be concluded that the incidence of diverticulosis coli is no greater in the presence of colonic polyps than in the controls.

### *Melanosis and Polyps*

Similarly, melanosis was found to have a general incidence of 14.5 per cent. In the presence of colonic polyps, melanosis coli occurred in 15 per cent of cases. In the pure controls, this condition occurred in 12 per cent. Thus, the occurrence of melanosis coli is greater in the presence of polyps than in the normal.

### *Comment*

In order to present more clearly the chain of events through which the development of polyps must pass there are included a series of photomicrographs. Figures 1, 2, 3 and 4 are presented in order to illustrate the changes from normalcy to malignancy. The primary change is epithelial (figure 1). The reason why a localized patch of epithelium undergoes aberration from the normal is not evident. However, the existence of morphologic changes of varying degree is apparent.

The genesis is recognized earliest by the more rapid proliferation of the epithelium at one site than in the neighboring epithelial elements. It is possible that this ability to proliferate is inherent in normal epithelium. If so, it would seem that some restraint or some inhibitory factor has been removed or attenuated, and thereby an indefinite degree of overgrowth is made possible. At times such change proceeds to the point of pedunculation of the mucosa, possibly designed to afford a greater base and easier nutritional supply for the growing structure. When this occurs a pedunculated so-called benign polyp is formed. The epithelium in the glands when the polyps first begin to develop exhibits primary hyperplasia (figure 2). The cells retain their normal microscopic appearance and apparent physicochemical function, such as the production of mucus. The numeric increase results in an enlargement in the size of each crypt of Lieberkuhn involved in the proliferative process. In order to accommodate for this increase the glandular structure itself must elongate. Limited by the muscularis mucosa and the subepithelial structures, this growth proceeds toward the lumen of the intestine. Such glandular hypertrophy becomes evident in a localized region in which the glands are taller and deeper than the neighboring surrounding structure. A tiny plaque or elevation is produced on the mucosal surface of the bowel.

From the observations of this study other changes are seen to follow. In the process of accommodation to the overgrowth, the tubules often become branched. The cells multiply faster than a given segment of the structure can accommodate. The nuclei pile on each other (figure 2-C). They lose their normal position near the membrana propria and move outward toward the lumen of the tubule. An increasing proportion of cytoplasm appears between nucleus and the base of each cell. The outline of the nuclei changes. The nuclei frequently lose their fusiform shape and become spherical. Polyhedral irregular nuclei are prominent.

There is an increase in the chromatin content of the nuclei in many cells. In others a vesicular character becomes evident. Mitotic figures are found more frequently. The columnar shape of the individual cells

gradually is lost and a more cuboid form is assumed. Cells lose their normal alignment and eventually present as a heterologous group with no regularity of position. The outlines of the glands become irregular.

The ability of the cells to produce mucus is lessened gradually. Some glands are devoid of mucus as visualized by mucin staining technic; others show goblet cells to be present but in progressively decreasing numbers.

The cells stain differently from normal cells and the degree of change from the normal is in direct proportion to the amount of cellular aberration. If simple hyperplasia only is present, staining usually is like that of normal cells. A small percentage of benign polyps displayed variation in their ability to stain with hematoxylin-eosin stain. As the cellular and nuclear changes increase, the divergence from the staining characteristics of normal tissue is greater. In the majority of instances the cells stain more deeply although a few are lighter than normal.

At the site of primary hyperplasia and in the benign polyps, the basement membrane is intact. However, as the series of epithelial changes progress there is a disrespect for the basement membrane and the cells burst through it and seemingly flow into the glandular interstices (figure 4).

When these changes are well established, not only has lack of respect for the basement membrane occurred but also the muscularis mucosa no longer serves as a barrier. The cells spread freely and in an uninhibited fashion into the subepithelial tissues. Glandular structures may, or may not, be retained when this occurs.

Minimal change is noted in the mucosal stroma until the larger polyps have been formed. At that period of development the polyps are frequently the seat of inflammatory changes and small hemorrhages. Necrosis within the polyp may be present.

The presence, or absence, of these changes forms a pattern. This pattern depicts an epithelial transition progressive from the normal, through the so-called benign polyps, to the various degrees of cellular dedifferentiation as present in frank malignancy.

### *Conclusions*

1. The pathogenesis of intestinal polyps from the earliest epithelial change to frank cancer have been traced.

2. Evidence that polyps are formed as a response to inflammatory disturbances is lacking in the current study.

3. The incidence of diverticulosis coli is not increased in the presence of intestinal polyps.

4. The incidence of melanosis coli is not increased in the presence of intestinal polyps.

On the basis of the evidence presented in this paper and in the literature as well as this abundant verification in clinical experience, it should be stated that the term "benign polyp" is not an innocent tumor but rather represents one stage in the pathogenesis of a cancer about which eventually there will be no quetsion.

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Note—Discussion of the foregoing papers by Drs. Freeman, Hock, Singer, and Atwater will be published in a subsequent number of this JOURNAL.

## HEALTHGRAM

The tuberculous patient should receive more than one gram of protein per day, and the diet must supply enough calories to balance his energy requirements. The calories supplied by carbohydrates and fats must contribute to the total fuel value in such a proportion that the calories from fats should not fall below 30 per cent or exceed 40 per cent. If the patient receives a diet adequate in all respects and supplying a sufficient amount of protein it is very probable that his body will store proteins for his repairing needs just as would be the case in an ordinary individual. J. D. Adamson, M.D., Canad. Tuberc. A. Tr., 1947.

# PYELOGRAPHY AS AN AID TO THE DIFFERENTIAL DIAGNOSIS OF UPPER ABDOMINAL MASSES

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*and*
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Routine retrograde and intravenous pyelography are useful and well recognized procedures in the differential diagnosis of upper abdominal masses. Invaluable information can often be obtained by modifying these procedures. It is our purpose to elaborate upon the diagnostic importance of lateral pyelography and respiratory pyelography. Mention of these procedures is conspicuously absent in modern urologic text-books.

The lateral pyelogram is made in a true lateral position with the affected side downward. Normally the shadows of the renal pelvis and calices are superimposed on the bodies of the 12th thoracic and 1st and 2nd lumbar vertebrae. The kidney occupies a vertical position. In the adult, the horizontal axis of the kidney is directed posteriorly at an angle of 40 degrees. Thus, the posterior minor calices are alone visualized while the anterior and lateral minor calices are obscured by the renal pelvis. In the presence of renal, extraperitoneal and intraperitoneal masses, the kidney may be displaced or rotated to the point of diagnostic importance.

Lateral pyelography was employed by Thompson-Walker and Knox[1] as early as 1923 to differentiate pelvic renal calculi, renal parenchymal calicifications, gallstones and stones in the common duct. Figure 1 illustrates the usefulness of this

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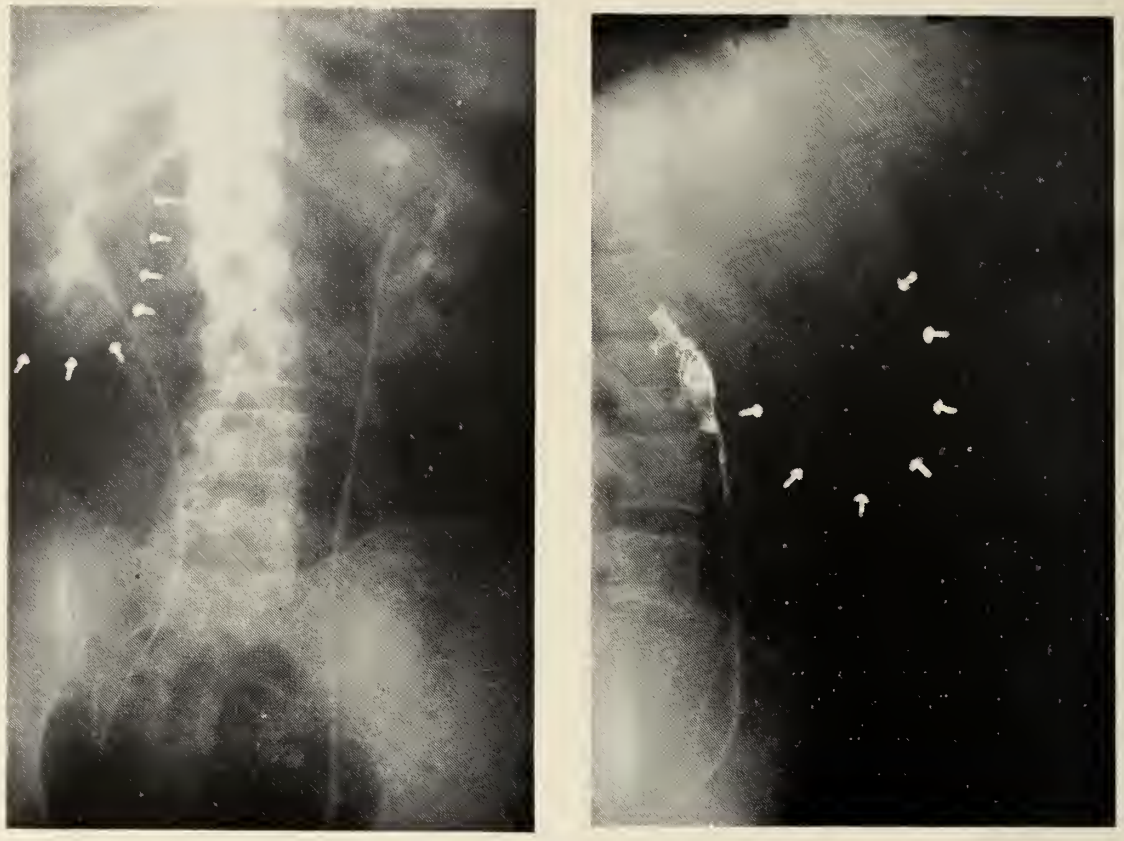


**Figure 1**

**A very obese, diabetic female, aged 55, was admitted to the urologic service with a painful right upper quadrant mass, accompanied by right lumbar tenderness. A routine pyelogram (on the left) showed a calcified mass corresponding to the right renal shadow, suggesting a calcified renal hydrocele. The lateral pyelogram (on the right) was normal and the abnormal shadow was produced by a hydropic, calcified gallbladder.**

procedure for a somewhat similar purpose.

Mertz[2] qualifies a satisfactory lateral pyelogram (Fig. 2) as demonstrating the vertical position of the kidney, its degree of rotation, either on the horizontal or vertical axis, and its anteroposterior position. The ureteropelvic juncture cannot, as a rule, be shown in the normal kidney with sufficient detail, but in the displaced kidney this point may be visualized in detail. The lateral pyelogram in Figure 3 demonstrates a marked posterior displacement of the kidney and ureteral angulation which is not apparent in the initial film.

Shiflet and Keith[3] found lateral pyelography helpful in the differential diagnosis of renal neoplasm and cysts, primary retroperitoneal tumors and retroperitoneal infections. It should be employed in all suspected cases of renal malignancy. In their opinion, anterior rotation of the lower pole of the kidney accompanied by an intrarenal deformity indicates an inoperable renal neoplasm.

Weyrauch[4] has made several interesting observations relative to lateral pyelography. In the presence of retroperitoneal tumors the kidney is prevented from migration by a short pedicle. However, torsion frequently occurs, but strangulation never takes place as the renal pedicle adjusts itself. This is likewise true of the ureter. In contrast to the pancreas which is easily compressed locally, the compactness of the kidney causes it never to be compressed regionally. Torsion due to extrarenal cause does not produce pelvic deformity, and if such a deformity is encountered it can be assumed that the lesion is intrarenal. If the kidney is rotated on two or more axes

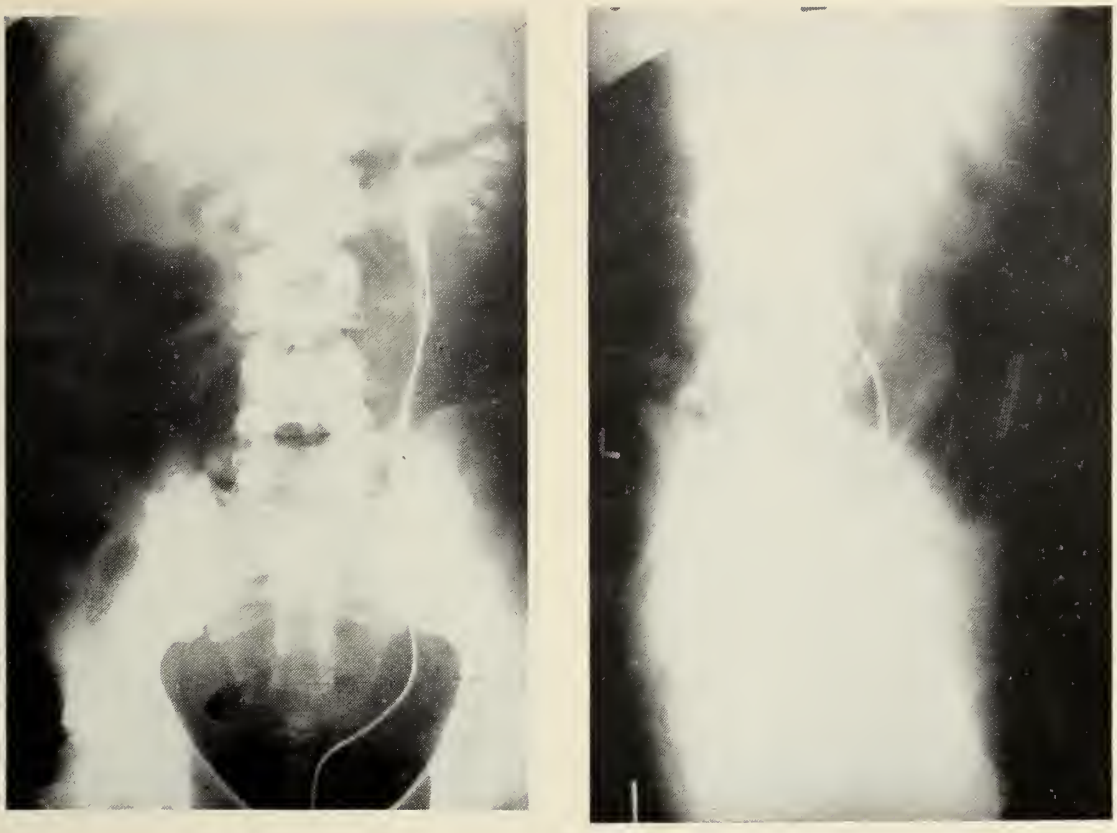


Figure 2

A 49 year-old Negro male with a large, fixed, painless mass in the left upper quadrant and flank, was admitted to the hospital for diagnostic study. A routine retrograde pyelogram (on the left) showed a normal left kidney. A normal splenic shadow was also visualized on the original film. Normal lateral pyelogram (on the right). A barium enema revealed a large bowel tumor.

the lesion is likely to be intrarenal. Horizontal rotation of the lower pole of the kidney is pathognomonic of a retroperitoneal mass. In 14 cases in which Weyrauch found renal rotation, the cause was retroperitoneal in 4 cases, intrarenal in 7 cases, and intraperitoneal in 3 cases.

It is not within the scope of this paper to discuss the realm of acquired etiologic factors which may produce renal displacement and rotation, but they may be summarized briefly. Of the intrarenal causes, renal neoplasm and cyst are the most common. We can find no reference in the literature of lateral pyelography having been employed in those cases in which early polycystic kidney disease was suspected, though not proven, with routine pyelograms. We believe a lateral pyelogram in such an instance would be diagnostic. Of the retroperitoneal causes, perirenal abscess and retroperitoneal neoplasms are the most common. Bell and others[5] have shown that the earliest demonstrable roentgenologic evidence of metastasis of testicular tumors is vertical rotation of the kidney due to enlargement of the adjacent pre-aortic lymph nodes. Beard and others[6] call attention to the characteristic "feathering of the ureters" in the more advanced cases, as illustrated in Figure 4. Schulte and Emmett[7] found the pancreas to be a rare cause of renal rotation even though a pancreatic cyst or tumor may attain great size. Of the intra-abdominal causes, enlargement of the spleen is probably the most frequent, though a rare cause. Shambought[8] states that intra-abdominal masses practically never cause renal displacement.

Respiratory pyelography is easily done.

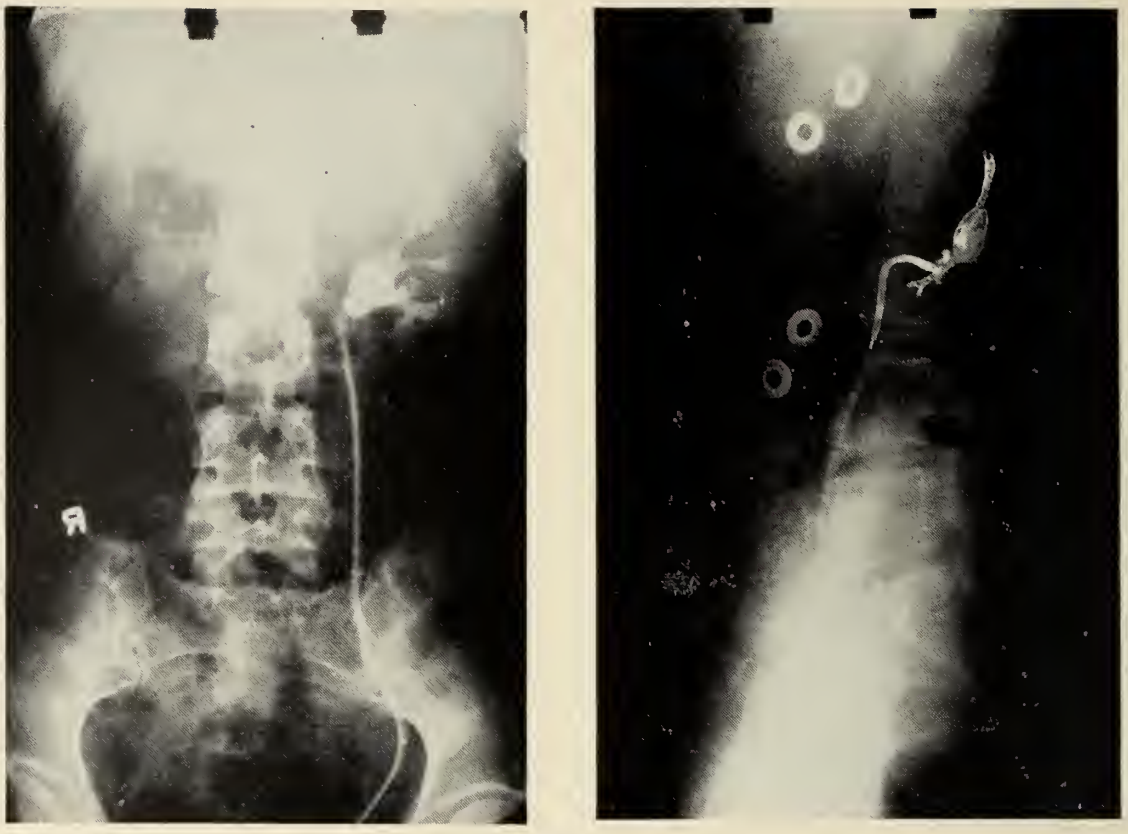


Figure 3

A 40 year-old white female was originally admitted on the medical service with pneumonia. While convalescent a painless mass developed in the left upper quadrant. Routine pyelogram (on the left) of the left kidney showed the superior major calix to be abnormally long and compressed and the kidney to be displaced inferiorly. On the original film pancreatic calculi were visualized throughout the entire organ. A respiratory pyelogram showed normal renal motion. Lateral pyelogram (on the right, retouched) showed marked posterior displacement of the kidney. The circular shadows are artefacts. At operation a ruptured pancreatic cyst was found which had caused well circumscribed necrosis of the medial and anterior aspects of the midportion of the kidney and retroperitoneal structures.

It finds its greatest application in the differentiation of inflammatory masses in the upper abdomen. It should be used in all cases of renal neoplasm to demonstrate renal mobility and, therefore, the operability of the tumor.

The earliest and most consistantly positive x-ray evidence of perirenal abscess is fixation of the involved kidney, Figure 5. This was first pointed out by Mathe[9] in 1935. In order to demonstrate renal mobility on a single film both kidneys are injected with contrast media and the film is doubly exposed, first on deep expiration and then on deep inspiration. Renal motion can be demonstrated during routine pyelography without making a double exposure, simply by making the pyelogram in deep expiration and the pyelo-ureterogram in deep inspiration. Normal renal motion with respiration is one inch, the involved kidney being fixed by adhesions or inflammation will not move.

It should be borne in mind that normal mobility depends on the diaphragm for its motivation. Hess[10] has shown that not only the kidney but all other viscera below the diaphragm and above the brim of the pelvis move with respiration while in the supine position. There will be no such motion of these organs, and particularly the kidney, if the diaphragm is fixed. In subdiaphragmatic abscess, flouroscopy reveals splinting of the involved leaf of the diaphragm and, therefore, no renal motion with a normal kidney.



Figure 4

A 29 year-old white male complained of mild, acute pain in the left midinguinal region. Palpation of the abdomen revealed a large painless mass in the epigastrium, and in left upper quadrant. The left testicle was irregular and very hard, although normal in size. Intravenous pyelography showed the left kidney to be displaced laterally and rotated on its vertical axis. Left orchiectomy revealed an embryonal carcinoma. Note the characteristically "feathered" left ureter, due to enlarged metastatic lymph nodes.

## *Summary and Conclusions*

1. Routine retrograde and intravenous pyelography are invaluable aids in the differential diagnosis of upper abdominal masses.

2. Lateral pyelography and respiratory pyelography are two pyelographic modifications which, in many cases, contribute additional information.

3. Lateral pyelography is particularly useful in suspected renal neoplasm, renal cyst and retroperitoneal masses.

4. Respiratory pyelography is particularly useful in early diagnosis of perirenal abscess.

5. The normal and the pathologic findings for both modifications have been discussed.



Figure 5

A 40 year-old Negro male was admitted to the hospital complaining of pain and tenderness in the right flank of several weeks duration. Physical examination revealed an elevated temperature, right flank tenderness and muscle spasm. The white count was elevated, and urinalysis was negative. A respiratory double exposure pyelogram showed no motion of the right kidney and normal motion of the left. At operation a right perirenal abscess was found.

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## HEALTHGRAM

Seventy per cent of all new cases of TB discovered by mass x-ray survey are minimal and do not constitute a grievous public health problem. Most of those cases will be noninfectious; the disease process will be incipient; and the probability of serious progression, with adequate follow-up, will be slight. Such cases can be cared for by private physicians and public clinics, assisted by public health nurses and medical social workers. Sanatorium beds now occupied by noninfectious cases can be given over to far-advanced virulent disease which constitutes a menace to the local population. Francis J. Weber, M.D., Ohio Pub. Health, February, 1948.

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JULY, 1948

## A. M. A. SUPPORTS EVERY PLAN FOR HIGHER LEVEL OF HEALTH

In addressing the House of Delegates of the American Medical Association recently, President Edward L. Bortz, of Philadelphia, said that "organized medicine has never failed to support any method which logically pointed toward a higher level of health for the American people."

"Far from being reactionary in attitude," he said, "the past history of the A. M. A. indicates a spirit, interest and aggressiveness in the search for better medical care. Medicine, as a profession, is socially-minded in action and outlook. The effectiveness of its activities may be found in the simple yardstick of the life span. Since the turn of the century, medical science has brought about an increase in the length of human life to an all-time high of 67 years. The monetary benefits to the consumers, since we are consumer-minded these days, are beyond calculation."

He added:

"A modern health program requires the participation of leaders from all walks of life in each locality. Because of their professional experience and training in the field of health and scientific medicine, members of the medical profession should assume leadership in the formulation of a satisfactory health program in every community. With emphasis on prevention, prophylaxis, and the maintenance of vigorous positive health, fewer patients should require hospital care, and the level of health should be improved. Likewise, the costs should decline.

"At the present time, the American Congress has a number of bills in process bearing on the problem of medical care in the event of national emergency. Discriminatory legislation for drafting physicians has been vigorously opposed by the American Medical Association. Such legislation is unconstitutional, and could not be sustained in court. Organized medicine is obligated to aid in the development of an over-all program which will adequately meet the needs of the entire population. The difficulty in drafting physicians and in placing the destiny of members of the medical profession in the hands of military authorities would bring a marked deficit of personnel to care for civilian requirements.

"Past experience has demonstrated the vast amount of waste in personnel and equipment which occurs when non-medical officials are given responsibility for allotment of medical resources. Hard-won experience should not be disregarded in the present hour of national concern.

"In our favored land, leadership in medicine is essential if the full potentialities of modern medical science are to be realized. The scientific method in medicine has infinite possibilities for improving human beings.

"The troubled world today is hoping for social stability. Citizens of all nations are longing to return to the peaceful pursuits without the ominous threat of human destruction. It should not be necessary to descend to the barbarous rule of the jungle in quest of a better way of life. The members of the medical profession, schooled in the intricacies of the management of disease, also possess an insight into the inner emotional mechanisms of their fellow human beings. The physician intimately knows the hopes and fears and aspirations of those whom he serves. In this sympathetic relationship, he is a leader in his community. An organization of such leaders possess the capacity, and have an unexcelled opportunity, to influence social trends in the direction of a higher level of health for community and nation."

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## DOCTORS SAY BONE BANK HAS GREAT POSSIBILITIES

Bone preserved in a frozen state for weeks is of "definite value" in bone-grafting operations, Dr. Leonard F. Bush, Danville, Pa., and Dr. C. Zent Garber, of New York, write in the June 12 issue of *The Journal of the American Medical Association*.

In an article entitled "The Bone Bank," the two doctors say that "if foods, serums and other perishable substances could be kept in a low temperature freezing cabinet, we decided that perhaps this method could be used to preserve bone so that a constant supply would be available at all times."

Experiments were undertaken and it was found that human bone can be preserved apparently indefinitely in a freezer at minus 20 to 30 centigrade.

"Spinal fusions for scoliosis and disorders in the lower part of the back, the filling of large bone cysts and the replacement of defects in bone are a few of the common problems in which large quantities of bone are necessary," the doctors state in their article.

The doctors, in their experiments, used large chinchilla rabbits. Control studies were made. Thirty-two bone transplantations were made by 28 operations on 19 animals. There were no casualties and in only one wound was there a superficial infection.

The experimental bone-grafting studies on rabbits showed that freezing at low temperature is a safe method of prolonged preservation of bone for grafting purposes. Bone grafts three to

six weeks after implantation proved successful. Some of the bone used had been frozen from 28 to 84 days.

"Having proved that this method of preserving bone was successful in animals, we felt it was safe to attempt it in man", the article says. "Thus all available clean fresh bone was placed in bottles and frozen at minus 25 degrees centigrade. Because infection developed in one case, the bone is now kept for two weeks before using, while the donor remains under observation for evidence of developing wound infection."

The doctors explained that by "exercise of diligence," considerable bone may be accumulated from many sources.

In discussing the clinical results, the doctors state that homogenous bone has been used in 126 operations in 104 patients. "Of these, 24 operations were by direct transfer; refrigeration at plus 2 to plus 5 C. was used in 37 instances, and the bone was stored in deep freezer for 43 operations."

In the 104 cases in which donor bone was used, there were only four complications. "The donor bone," the article says, "furnished a framework for the formation of new bone by substitution and by furnishing the necessary calcium for this new bone."

In discussing the paper, Dr. J. R. Cobb says that from his experience at the Hospital For Special Surgery in New York bone can be kept indefinitely if it is kept constantly at a sufficiently low temperature without contamination and sealed.

"All of us who have used refrigerated bone," he says, "have been impressed by the simplicity, safety and usefulness of the bone bank. However, while a bone bank on a small scale is desirable in every hospital with an active bone and joint service, there are great potentialities for further development of the bone bank. We need an organization on a much larger scale, of a community bone bank to supply the needs of surgeons for bone transplants of every size and description."

## PREPARE GLOSSARY OF TERMS USED IN ATOMIC ENERGY

To better inform the physician, the Council on Physical Medicine of the American Medical Association has prepared a glossary of terms used in atomic energy and nuclear physics.

The introduction to the pamphlet says that "nuclear physics as it develops will have important consequences to the practicing physician. New types of injury may require treatment, new hazards will require prevention and new methods of treatment, diagnosis, and research will be introduced. In attempting to inform himself about recent discoveries the physician is constantly baffled by the new vocabulary, which contains some words too recent or too technical to be found in older or less specialized dictionaries. The present glossary is intended to be helpful in this respect."

The glossary was adopted by the Council on Physical Medicine of the American Medical Association, assisted by a large number of consultants on roentgen rays and radium and on the medical aspects of atomic energy.

The glossary explains such terms as atom, atomic number, chain reaction, cosmic rays, cyclotron, element, energy, isotron, isotopes, neutron, radioactivity, radioactive chain, radon, plutonium, uranium, volt and wavelength.

The pamphlet also contains symbols used in writing nuclear reactions.

## HOUSE DUST MAY CAUSE INFANTILE ECZEMA

The possibility that house dust is an important cause of atopic dermatitis, or infantile eczema, is advanced by Jerome Glaser, M. D., of Rochester, N. Y., writing in a recent issue of *The Journal of the American Medical Association.*

Infantile eczema is an allergy disease which, it is believed, is caused by direct contact of the skin with certain allergens, as well as by allergens which have been inhaled and which reach the skin through the blood stream. An allergen is any substance which is capable of inducing allergy or specific susceptibility.

Among the characteristics of atopic dermatitis are watery sores, scales and crusts, and itching or burning sensations. The affliction is commoner in infants and children because their tender skins are more easily penetrated by allergens than those of adults.

According to Dr. Glaser, "the characteristic distribution of atopic dermatitis, with lesions worse on the face, the area of the arms below the elbows and the area of the legs below the knees, suggests a possible contact origin." In view of this, he says, "it is tempting to consider that such lesions might be caused by a ubiquitous and powerful allergen, house dust, which could act either by contact or inhalation."

As further evidence of the importance of house dust in causing infantile eczema, Dr. Glaser points out that "the often remarkably beneficial results of hospitalization are commonly attributed to avoidance of house dust as well as of other environmental allergens," adding that good results in the alleviation of the condition have also been attained by treating patients with injections of house dust extract.

According to the article, there is no completely satisfactory treatment of infantile eczema and therefore "the problem is to do the best one can with a disease which is usually self limited, with a tendency to spontaneous remissions and eventual recovery regardless of therapy."

Prophylactic, or preventive measures, such as

avoidance of dust or irritating wool clothing, are considered important in the orthodox treatment of the disease. Special baths, prepared by adding a cup or two of cornstarch to a tub of tepid water, are also recommended for early stages of the disease.

The local application of paste of resorcinol, made up of one part zinc oxide, one part corn or arrowroot starch, and two parts white petrolatum is highly satisfactory in more advanced or chronic stages. In all cases of atopic dermatitis, the article says, it is well to put the patient on a simple elimination diet, which includes substitutes for cow's milk and the administration of vitamins A, D and C.

## WORK ON UNIVERSAL PHARMACOPOEIA PROGRESSING

Preparation of an international pharmacopoeia under the auspices of the World Health Organization of the United Nations was continued at a meeting of the Expert Committee on the Unification of Pharmacopoeias held in Geneva from May 31 to June 5, 1948. At this session, the second of its kind, further progress was achieved toward setting up a unified system of nomenclature to provide that the same name should represent a drug of the same potency and composition in all countries.

The Expert Committee made several important decisions and agreed, among other things, that proprietary drugs should be included in the international pharmacopoeia. It was also decided that a list of usual and maximal doses should be prepared, and advice from the medical profession sought, before submission to the next meeting of the Committee. The question of doses for children was raised, but the Committee felt that for the moment no action should be taken. In addition, it was agreed in the case of injection to specify the route of administration.

## TIME FOR PLAY

The axiom "a change is as good as a rest" is a fact, for man, woman and child, according to a health talk of the Educational Committee of the Illinois State Medical Society. This is particularly true of the person who "loves" his job and, in fact, is so fond of it that he doesn't want to be away from it, even for a time.

Everyone needs a vacation because, unconsciously or not, everyone gets tired of doing the same thing, no matter how happy one is in the accomplishment, and it is wise to remember that sameness can produce staleness.

A vacation need not be expensive. One does not need even to go away. A vacation is just taking time out to do many of the things that are not included in the ordinary working day. Getting away from the job and carrying on these different activities, if not carried to excess, is a form of recreation that puts a new zest and vitality in returning to the "work-a-day" chores.

Children, for example, grow tired of school life. The routine of classes and study have a palling effect on the child which shows in the wild cry of "school's out" on the last day of the school year. In the adult, there is pleasant excitement in planning for vacation and the first day away from office routine is every bit as satisfying as the child's joy that school is out.

So plan your change and plan it with all the enthusiasm of a young heart. Bear in mind, however, that a wise head will really keep your vacation a happy time for yourself and those for whom you are responsible.

If camping is your idea of a vacation, be wise in the selection of your camp site. Be sure that sanitary conditions are all they should be. Impure drinking water, milk that has not been pasteurized and lack of sewerage are conditions to avoid because, by avoiding them, you by-pass many infections, such as the typhoid bacillus, the germ responsible for typhoid fever. Know about insects and the infections they carry and about snakes and how to avoid them.

If an automobile trip fits into your plans, avoid carelessness and haste in driving. An accident to you, or someone else, will turn your trip into tragedy instead of pleasure.

Outdoor sports, such as golf and tennis, should be fun, but if carried to excess, will result in aching muscles, fatigue and even a heart attack which may put you in bed for weeks. Too much sun can make you sick, instead of giving the attractive sun-tan you hoped for. Water sports, swimming, boating and fishing, are fine, but be careful; learn to swim and how to resuscitate persons rescued from drowning.

Plan your vacation as judiciously as you would any other constructive program. If, on the return to your routine, you feel it necessary to "catch up" on sleep or rest, then your leisure time has been misspent. If, on the other hand, you return to your job, or your child to his school room, with a new zest you have accomplished the true purpose of a vacation.

And another bit of advice to pack in your kit of common sense, just in the event of an emergency, is the name of the president or secretary of the county medical society where you will be. Keep it handy, so that if you do need medical attention you can get it promptly from one you can trust.

## SYPHILIS RECORDS AVAILABLE

The Veterans Administration has in its custody the majority of syphilis records of those Army personnel who were treated for this disease while in active service, and in many instances can procure informative data from the syphilis records of other than Army personnel. It is thought that many physicians treating veterans for syphilis as private patients would find a resume of the syphilis record useful since the details of treatment, results of spinal fluid examinations, and blood serologies are incorporated in the records.

Resumes of these records are available to physicians who are treating such veterans provided authorization for the release of the data is given by the veteran. Requests for the resumes accompanied by an authorization for the release of the data, dated and signed by the veteran, should be addressed to the Dermatology and Syphilology Section, Veterans Administration, Munitions Building, Washington 25, D. C. It is most important that the veteran's Service Serial Number and other identifying information, such as the date of enlistment, the date of discharge, rank, and organization be included.

Ordinarily, the resumes can be furnished in approximately two weeks from the date of the receipt of the request and signed authorization.

## TANTALUM GAUZE MAKES POSSIBLE REPAIR OF LARGE HERNIAS

A new method of repairing large hernias with a material called tantalum gauze has just been developed, which makes possible the control of a much wider range of hernial defects.

In treating ordinary hernia the surgeon carefully pushes back any internal organs which may have protruded through the ruptured spots, pulls the torn tissues together as closely as possible, and holds them with stitches or sutures. In most cases the rupture will thus stay closed, with the help of new tissue growth which is able to span the closed wound.

But if the hernia is large, with an even larger area of very weak tissue around it, this method of hernia repair naturally does not have as much chance of holding successfully. With tantalum gauze—which is not a gauze at all, but a very fine wire mesh made of tantalum (a metal which is also used in plates for repairing

bones and joints)—these large hernias can be reinforced much as though a ready-made darn were inserted into a sock.

As much of the hernia is repaired by usual methods as possible, but no attempt is made to join weakened or torn ligaments or tissue. Instead, the opening is covered with a patch of the tantalum gauze. This mesh is fastened firmly, without tension, to dependable supporting tissues. The mesh has no harmful effect on the tissues, but it is soon encased and infiltrated by dense, fibrous scar tissue. Such tissue provides adequate support even if the wires should be broken by body movements.

An Iowa doctor of medicine, reporting on the use of this material in 17 hernia patients, maintained that the tantalum gauze caused no discomfort or wound complications. In the 3 to 26 months he had observed these patients, there was no recurrence of the hernia.—Michigan State Medical Society.

## JOURNAL REVIEWS MEDICAL ASPECTS OF ATOMIC EXPLOSIONS

*The American Journal of Roentgenology and Radium Therapy* states editorially in its current issue that several more years must elapse before medical scientists can complete their study of the injurious effects resulting from the explosion of the atomic bombs over Hiroshima and Nagasaki.

Although three years have now elapsed since "massive atomic energies" were suddenly released over the Japanese cities, the journal says that "further observations over a long period of time are necessary before the entire picture can be fully evaluated."

On the basis of studies made so far, says the journal, there is good reason to believe that reproductive disturbances, malignancies of one form or another, shortened life span, and altered genetic pattern will in time appear in greater or lesser degrees.

"The injurious effects resulting from the explosion of an atomic bomb may be placed in two main groups," the editorial says. "The first includes the immediate injuries which may range from sudden death in one zone, to severe reaction in another, and no noticeable effect in a third. The second group contains the late changes and especially the more or less permanent sequelae which have resulted over a period of years. Eventually, a third group may be added, including the genetic (reproduction) changes, but it may be one or several generations before such changes can be properly evaluated."

Continuing, the editorial says:

"In view of the conflicting figures on the number and type of casualties, the exact status was determined through the cooperation of Professor Masao Tsuzuki of the Tokyo Imperial University. The Hiroshima prefecture listed, 19 days after the explosion, 46,185 persons as dead, 17,429 as slightly injured, and 235,656 as suffering from other diseases. In other words, the number of dead and missing amounted to 63,614. Six months after the catastrophe the toll of dead and missing stood at 92,133, excluding the military dead.

"In Nagasaki the toll was 23,753 dead, 1,924 missing, 23,345 wounded, and 89,025 other sufferers."

A study of the sex incidence showed that the distribution was equal in one area, but in another sector more women survived than men.

"Apparently under identical conditions," the editorial says, "women are more resistant than men."

Medical investigators have learned that many of the burns suffered by the Japanese healed with large keloids, which are described as new growths of skin consisting of whitish ridges and plaques of dense tissue.

"The maximum growth of such tissue," the editorial says, "was reached within eight to ten months following the injury. There is no definite evidence linking the occurence of keloid specifically to an atomic energy exposure. Perhaps the severe infections which always complicated the second degree and third degree burns may have played a part in their production. So far, no malignant degeneration of the keloid tissue has been observed in a single case."

## HEALTH RECORD IMPROVES

The health record among U. S. life insurance policyholders during the first half of this year has continued at or near the record low of last year, with indications that maintenance of the current experience could see a new record low mortality rate established this year, the Institute of Life Insurance reports.

During the early months of the year, there was an upturn in the death rate, but since then conditions have improved somewhat.

"In the first six months of 1948, new record lows were estimated for several death causes," the Institute said. "Tuberculosis continued its long sustained decline, this year's death rate from this cause so far being 40 per cent under that of ten years ago.

"The death rate from the communicable diseases of childhood showed even more striking ten year gains. The 1948 improvement in all major childhood diseases except measles over last year's record low brought the rate to a level about one-fifth that of ten years ago.

"Influenza also has abated this year, its death rate being well under last year's and about one-third that of ten years ago. Pneumonia shows a slightly lower relative toll this year.

"The accident toll is lower again this year, with motor vehicle accident fatalities to date being nearly as low as during the war years, when auto mileage was restricted and new cars were few.

"Heart disease and cancer deaths were the two black spots on the half year's health record, both showing increases. The cardiovascular-renal disease group—this being the broad category classified as the area of heart and circulatory afflictions and related ailments—showed a material increase. Had it not been for the increase caused by these maladies, the half year over-all death rate would have been clearly at a new record low."

## MEDICAL OFFICER EXAMINATION ANNOUNCED

The U. S. Civil Service Commission has announced an examination for filling medical officer (rotating intern and psychiatric resident) positions in St. Elizabeth's Hospital, Washington, D. C.

Medical officers (rotating intern) are paid $2,200 for the first year and $2,400 for the second year. Medical officers (psychiatric resident) are paid from $2,400 to $4,100 a year, depending upon the amount of approved post-graduate training the applicant has completed. Appointments are open for July 1, 1949. Internships consist of two years of rotating service, and psychiatric residencies consist of one to three years in psychiatry. To qualify for internships applicants must be third or fourth year students in an approved medical school; however, they may not enter on duty until they have successfully completed the full course of study. Applicants for psychiatric residencies must be graduates of an approved medical school, with the degree of doctor of medicine, and, in addition, they must have completed an approved internship or must now be serving such an internship. No written test is required for the medical officer positions. Details about the requirements are given in the examination announcement.

Interested persons may secure information and application forms from the U. S. Civil Service Commission, Washington 25, D. C., from most first- and second-class post offices, and from Civil Service regional offices. Applications will be accepted until further notice in the Commission's Washington office.

## RESEARCH FELLOWSHIPS—THE AMERICAN COLLEGE OF PHYSICIANS

The American College of Physicians announces that a limited number of fellowships in medicine will be available from July 1, 1949-June 30, 1950. These fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. Assurance

must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work. The stipend will be from $2,200 to $3,200.

Application forms will be supplied on request to The American College of Physicians, 4200 Pine Street, Philadelphia 4, Pa., and must be submitted in duplicate not later than November 1, 1948. Announcement of the awards will be made as promptly as is possible.

## NAVY'S NEW MEDICAL TRAINING PROGRAM

The Surgeon General of the Navy has announced the expansion of the Bureau's professional training program for reserve and regular medical officers, which is similar to the recently expanded Army medical training program. The object is to permit more Navy doctors to meet the requirements for certification by the various American Specialty boards, and to encourage the young doctor to intern under the auspices of the Navy. The following are the important points in this program:

Graduates of Class A medical schools who have been accepted for internship by a hospital approved for such training by the Council on Medical Education and Hospitals of the A. M. A. may be commissioned as lieutenants (junior grade), MC, USNR, and permitted to continue their intern training. They will receive all the pay and allowance of the rank while so serving. After completing their internships, the medical officers must remain on active duty for a period of one year. If they meet the professional, physical and moral requirements, they will be given every encouragement to transfer to the regular Navy.

Interns who have completed the one year of obligated service and who have transferred to the regular Navy, may be considered for residency training on a competitive basis with other officer personnel of the regular Medical Corps.

Resident physicians now in civilian hospitals, or those accepted for approved residency training, are eligible for commissions in the regular Navy. Those so commissioned will be assigned to duty, with full pay and allowances, in the hospital in which they are already a resident, or to which they have been accepted for residency training. Every attempt will be made to permit residents holding commissions in the regular Navy to complete their training in event of an emergency.

The Navy has at the present time 400 approved residencies and fellowships in the various specialties recognized by the American Specialty Boards in Naval and civilian hospitals. This educational training involving the 400 residencies is divided into 2 programs.

Program A: One hundred of the above-mentioned residencies, courses, and fellowships will be made available for civilian physicians accepting a commission in the U. S. Navy. An additional 100 civilian physicians will be commissioned in the U. S. Navy and permitted to pursue their own course, fellowship or residency, provided it is approved by the Council on Medical Education and Hospitals of the American Medical Association with concurrence of the Specialty Board. Upon acceptance of the designated training, they will be required to agree to remain in the Navy for a certain obligated time.

If on original appointment a candidate has not been approved for more than one year of training, during his first year of residency training (Program A) he may compete for one of the 300 residencies (Program B) available to the Regular Naval medical officers, and if he obtains such training he will obligate himself to remain on active duty for an additional period depending upon the amount of time spent in training.

Program B: Three hundred residencies, fellowships or courses, will be reserved for continuing the Training Program as presently organized for regular medical officers.

The obligated service following graduate medical training (courses, fellowships and residencies) in Naval hospitals is one year for each year of training received.

Information concerning any part of the program may be obtained by writing to the Chief of the Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C.

## X-RAY TREATMENT OFFERS BEST CURE FOR RINGWORM OF SCALP

The most stubborn cases of ringworm of the scalp, which reached epidemic proportions among school children in several eastern cities during the last few years, are best treated by x-rays, according to Drs. Eugene P. Pendergrass and J. Francis Mahoney, of Philadelphia

Writing in the current issue of *RADIOLOGY*, the two doctors state that "temporary epilation (removal of hair) of the scalp by x-rays is the treatment of choice" for ringworm. "In no other disease has x-ray therapy shown such a favorable percentage of cures over any other type of treatment. The excellent results are indeed surprising. In the proper hands, with adequate equipment, the procedure is painless."

Ringworm of the scalp, the doctors explained, has been epidemic along the eastern seaboard of the United States since 1943.

The infection, caused by a fungus, is spread by infected hairs and the principal places of contact are the home, the school, the playground, the theater, and the barber shop.

## VETERANS' NEWS

Veterans Administration certified for payment 6,666,000 checks during May, mostly for veterans' benefits such as subsistence allowances, pensions and compensations. Placed end to end, the checks would reach 789 miles.

* * *

Construction of a 200-bed Veterans Administration hospital in Spokane, Wash., began in May. The hospital will be used for general medical and surgical patients, VA said.

* * *

Veterans Administration assigned 87,000 "C" numbers to veterans and their dependents during May—the lowest figure since 1945. "C", or claim numbers are issued to veterans who file claim for any Veterans Administration benefit.

* * *

About 34,000 World War II veterans applied for G. I. loans during May, Veterans Administration said. This represented a seven per cent increase over the April total, the first substantial rise since September, 1947.

* * *

Summer vacations largely accounted for a decrease of 120,000 in the number of World War II veterans training under the G. I. Bill and Public Law 16 on June 1, Veterans Administration said. At that time, 2,584,000 were in training under both laws compared with 2,704,000 in training on May 1.

* * *

The number of living veterans on Veterans Administration disability compensation and pension rolls has decreased steadily over the past 13 months, VA said. The total dropped from a peak of 2,328,000 on May 1, 1947, to 2,289,000 on June 1, 1948—a decrease of about 39,000.

* * *

About 90 per cent of the 1,353,000 World War II veterans who obtained G. I. loans by June 1 used their money to buy or build homes, Veterans Administration said. Of the remaining 10 per cent, nearly 95,000 veterans went into business and 46,000 bought farms and farm equipment.

It is well known that the incidence and severity of illness are greater among the urban poor than among the more prosperous groups. Ignorance is a factor in promoting high sickness rates, but ignorance is in part a result of poverty. Medicine in the Changing Order, Rep. New York Academy Med. Com., The Commonwealth Fund, 1947.

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## TYPHUS FEVER IN GEORGIA DROPS TO NEW LOW LEVEL

The reported incidence of murine typhus fever in Georgia dropped to 436 reported cases in 1947 as compared with 606 cases in 1946 and 1,111 cases in 1945. Since the DDT dusting and rat eradication program for typhus control was started during the latter part of 1945, the decrease in reported cases for the two-year period, 1945 through 1947, was 675 cases or 61 per cent. For the same period, 59 deaths were reported in 1945 as compared with 31 cases reported in 1947, a decrease of 28 deaths or 47.4 per cent.

The number of murine typhus fever cases reported for 1947 is the lowest number of cases reported for the State since 1934. This comparison, as well as comparisons of other years since 1930, of the reported incidence of murine typhus fever in Georgia may be made from Table 1.

TABLE 1

*Murine Typhus Fever Cases Reported By Years for the State of Georgia*

| *Year* | *No. Cases* | *Year* | *No. Cases* |
|---|---|---|---|
| 1930 | 162 | 1939 | 1131 |
| 1931 | 127 | 1940 | 589 |
| 1932 | 308 | 1941 | 946 |
| 1933 | 625 | 1942 | 1153 |
| 1934 | 407 | 1943 | 1256 |
| 1935 | 489 | 1944 | 1182 |
| 1936 | 817 | 1945 | 1111 |
| 1937 | 1092 | 1946 | 606 |
| 1938 | 1017 | 1947 | 436 |

Comparing the reported incidence of murine typhus fever according to counties in Table 2, it may be observed that the number of counties not reporting any typhus fever cases increased by 29 or 18.1 per cent from 1945 through 1947. Conversely, the number of counties reporting 1 or more cases of typhus fever for the three-year period decreased by the same number and per cent. For 1947, 52.3 per cent or 83 of the total 159 counties of the State reported 436 typhus fever cases as compared with 70.4 per cent or 112 counties reporting 1,111 cases for 1945. It may be further observed from Table 2 that no counties reported more than 40 cases in 1945 and 1946 as compared with 4 counties reporting between 61 and 143 cases in 1945.

The greatest reduction in the number of typhus fever cases reported by counties for the years 1946 and 1947 took place in five of the most densely populated counties, namely; Chatham, Bibb, Richmond, Fulton, and DeKalb. In 1947 this group of counties reported 33 cases as compared with 77 cases in 1946 and 427 cases in 1945. A decrease of 394 cases or 92 per cent occurred in 1947 as compared with 1945. This group of counties, comprising about one-fourth of the total population of the State, reported 7.6 per cent of the total number of cases reported for the State in 1947 and 39 per cent of the total number of cases reported for the State in 1945. This decrease in reported cases, since 1945, may be considered significant and reflecting upon the decrease in State-wide incidence as reported during the period 1945 through 1947.

TABLE 2

*Distribution of Counties According to the Number of Typhus Fever Cases Reported*

| | 1945 | | 1946 | | 1947 | |
|---|---|---|---|---|---|---|
| *No. Cases* | *Counties Reporting* | | | | | |
| *Reported* | *No.* | *Per Cent* | *No.* | *Per Cent* | *No.* | *Per Cent* |
| None | 47 | 29.6 | 56 | 35.2 | 76 | 47.7 |
| 1- 5 | 62 | 39.0 | 61 | 38.4 | 56 | 35.2 |
| 6-10 | 22 | 13.8 | 28 | 17.6 | 14 | 8.8 |
| 11-15 | 16 | 10.1 | 8 | 5.0 | 9 | 5.7 |
| 16-20 | 4 | 2 5 | 3 | 1.9 | 2 | 1.2 |
| 21-25 | 2 | 1.2 | 2 | 1.2 | 1 | .7 |
| 26-30 | 2 | 1.2 | | | | |
| 31-35 | | | 1 | .7 | | |
| 36-40 | | | | | 1 | .7 |
| 61-65 | 2 | 1.2 | | | | |
| 137 | 1 | .7 | | | | |
| 143 | 1 | .7 | | | | |
| Total | 159 | 100 | 159 | 100 | 159 | 100 |

While there is no doubt many factors that may have contributed to the decrease in the number of typhus fever cases reported for the State since 1945, control measures, such as DDT dusting, deserve definite consideration as a prime contributing factor to this decrease. DDT dusting operations should especially be given this consideration in the light of the decrease that took place in five of the most densely populated counties of the State and the sharp reduction that took place in Chatham County as shown in Table 3.

TABLE 3

*Typhus Fever Cases Reported from Chatham County By Years*

| | | | | | |
|---|---|---|---|---|---|
| 1930 | 65 | 1936 | 81 | 1942 | 82 |
| 1931 | 71 | 1937 | 96 | 1943 | 119 |
| 1932 | 117 | 1938 | 87 | 1944 | 141 |
| 1933 | 83 | 1939 | 103 | 1945 | 143 |
| 1934 | 77 | 1940 | 74 | 1946 | 21 |
| 1935 | 51 | 1941 | 86 | 1947 | 8 |

From Table 3, the 8 cases reported in 1947 for Chatham County is the lowest number of cases reported in 17 years. In fact, other than for 6 cases that were reported in 1929, the 1947 figure is the lowest on record by the State Department of Public Health for Chatham County.

The DDT dusting of rat runs, harborages, and burrows for the destruction of rat fleas and other rat ectoparasites that might serve as vectors of murine typhus fever was first added to the State-wide Typhus Control Program during the last three months of 1945 and continued through 1946 and 1947. During this period, typhus control services were rendered to 73 counties in 1946 and 76 counties in 1947. For the two-year period, approximately 1,000,000 pounds of DDT

dust were applied to approximately 331,000 rat infested premises. Chatham County, having probably the largest DDT dusting program of any county, used approximately 100,000 pounds of DDT dust for the two-year period.

While DDT dusting has been the principal typhus control measure, other control measures applied consisted of ratproofing of buildings, rat eradication by poisoning, and the improvement of municipal refuse collection and disposal practices.

Although typhus fever in Georgia for 1947 reached a new low level, indications for the first five months of 1948 point to possibly a still greater reduction during this year. This is indicated by the 39 cases that have been reported for the period January through May, 1948, as compared with 171 cases reported for this same period of 1947. This is a decrease of about 77 per cent below the 1947 level.

As an added means of controlling murine typhus fever in Georgia, the Typhus Control Service plans to make epidemiologic investigations of all murine typhus fever cases reported during 1948.

The purpose of these investigations is to determine the foci of infection whereby control measures, such as the application of DDT dust, may more effectively be applied. This service will be in addition to the routine DDT dusting programs conducted in certain counties participating in the typhus control program.

The cooperation of physicians in reporting typhus fever cases to the local or state health departments, so that we may more effectively combat this disease, is appreciated.

ROY J. BOSTON, *Director*
Typhus Control Service
Division of Preventable Diseases

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MEDICAL ASSOCIATION OF GEORGIA
*Financial Statement of Cash Assets*
April 1, 1947 to March 31, 1948

RECEIPTS

| | | |
|---|---|---|
| April 1, 1947: | | |
| Cash in Citizens & Southern National Bank subject to check | $ 18,355.46 | |
| Six $1,000 U. S. Government Bonds, with accrued interest, Series D, 337880-85, June 1939, 10-year bonds | 5,640.00 | |
| Four $1,000 U. S. Government Bonds, with accrued interest, Series D, 843380-83, January 1940, 10-year bonds | 3,680,000 | |
| One $10,000 U. S. Government Bond, with accrued interest, Series F, X183923, June 1944, 12-year bond | 7,670.00 | |
| One $5,000 U. S. Government Bond, Series G, V562461, July 1945, 12-year bond | 4,780.00 | |
| One $10,000 U. S. Government Bond, Series G, X507962, July 1945, 12-year bond | 9,560.00 | |
| One $5,000 U. S. Government Bond, Series G, V632061, March 1947, 12-year bond | 4,890.00 | |
| One $10,000 U. S. Government Bond, Series G, X641668, March 1947, 12-year bond | 9,780.00 | |
| One $5,000 U. S. Government Bond Series G, V633024, January 1948, 12-year bond | 4,940.00 | |
| One $10,000 U. S. Government Bond, Series G, X642297, January 1948, 12-year bond | 9,880.00 | |
| Standard Federal Savings and Loan Association, with interest | 6,199.55 | |
| Receipts from operating (April 1, 1947 to March 31, 1948) | 35,270.92 | |
| | | $120,645.93 |

DISBURSEMENTS

| | | |
|---|---|---|
| March 31, 1948: | | |
| Disbursements itemized | $41,403.86 | |
| Cash in bank subject to check | 12,222.52 | |
| Six $1,000 U. S. Government Bonds | 5,640.00 | |
| Four $1,000 U. S. Government Bonds | 3,680.00 | |
| One $10,000 U. S. Government Bond | 7,670.00 | |
| One $5,000 U. S. Government Bond | 4,780.00 | |
| One $10,000 U. S. Government Bond | 9,560.00 | |
| One $5,000 U. S. Government Bond | 4,890.00 | |
| One $10,000 U. S. Government Bond | 9,780.00 | |
| One $5,000 U. S. Government Bond | 4,940.00 | |
| One $10,000 U. S. Government Bond | 9,880.00 | |
| Standard Federal Savings and Loan Association | 6,199.55 | $120,645.93 |

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MEDICAL ASSOCIATION OF GEORGIA
*Receipts and Disbursements*
April 1, 1947 to March 31, 1948

RECEIPTS

| | | |
|---|---|---|
| Cash on hand subject to check | $18,355.46 | |
| Receipts (other than accrued interest) | 35,270.92 | $53,626.38 |

DISBURSEMENTS

| | | |
|---|---|---|
| Disbursements itemized | $41,403.86 | |
| Cash in bank subject to check | 12,222.52 | $53,626.38 |

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THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA
*Receipts and Disbursements*
April 1, 1947 to March 31, 1948

RECEIPTS

| | | |
|---|---|---|
| Advertising | $14,269.67 | |
| Membership subscriptions | 6,309.76 | |
| Regular subscriptions | 93.00 | $20,672.43 |

DISBURSEMENTS

| | | |
|---|---|---|
| Printing and mailing | $10,121.10 | |
| Salaries | 2,900.00 | |
| Postage | 389.00 | |
| Engraving | 429.00 | |
| Extra secretarial work | 300.00 | |
| Commission on advertising | 119.23 | |
| News clippings | 70.00 | |
| Copyright | 24.00 | |
| Addressograph | 66.66 | |
| Envelopes for mailing The Journal | 190.73 | |
| Gain | 6,062.71 | $20,672.43 |

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MEDICAL ASSOCIATION OF GEORGIA
*Receipts and Disbursements*

SOURCES OF INCOME

| | |
|---|---|
| Dues | $13,047.25 |
| Advertising | 14,269.67 |
| Exhibits | 7,111.00 |

| | | |
|---|---|---|
| One $5,000 U. S. Government Bond | 4,940.00 | |
| One $10,000 U. S. Government Bond | 9,880.00 | |
| Interest | 1,266.85 | |
| Subscriptions | 93.00 | $50,607.77 |

DISBURSEMENTS

| | | |
|---|---|---|
| Itemized expenses | $41,403.86 | |
| Gain | 9,203.91 | $50,607.77 |
| April 1, 1947: | | |
| Cash and cash assets | $70,038.16 | |
| Gain in cash and cash assets | 9,203.91 | |
| March 31, 1948: | | |
| Cash and cash assets (March 31, 1948) | $79,242.07 | |

INCOME

April 1, 1947 to March 31, 1948

| *Date Deposited in Bank* | *Sources* | *Amount* | |
|---|---|---|---|
| April 19, 1947 | Dues | $1,215.00 | |
| | Ads | 961.84 | |
| | Subscriptions | 3.50 | |
| | Exhibits | 150.00 | $2,330.34 |
| May 23, 1947 | Dues | 453.00 | |
| | Ads | 1,182.36 | |
| | Subscriptions | 4.50 | |
| | Exhibits | 585.00 | 2,224.86 |
| June 19, 1947 | Dues | 266.00 | |
| | Ads | 1,074.52 | |
| | Subscriptions | 8.50 | |
| | Exhibits | 300.00 | 1,649.02 |
| July 22, 1947 | Dues | 343.00 | |
| | Ads | 1,191.30 | |
| | Interest U. S. Bonds | 187.50 | |
| | Subscriptions | 4.50 | 1,726.30 |
| Aug. 25, 1947 | Dues | 101.50 | |
| | Ads | 1,142.67 | |
| | Subscriptions | 5 50 | 1,249.67 |
| Sept. 26, 1947 | Dues | 122.75 | |
| | Ads | 1,285.98 | |
| | Interest U. S. Bonds | 187.50 | |
| | Subscriptions | 2.00 | 1,598.23 |
| Oct. 30, 1947 | Dues | 122.50 | |
| | Ads | 1,043.00 | 1,165.50 |
| Nov. 26, 1947 | Dues | 87.50 | |
| | Ads | 1,139.02 | |
| | Subscriptions | 4.00 | |
| | Exhibits | 2.208.50 | 3,439.02 |
| Dec. 19, 1947 | Dues | 280.00 | |
| | Dues 1948 | 780.00 | |
| | Ads | 2,255.61 | |
| | Subscriptions | 14.00 | |
| | Exhibits | 2.499.00 | 5,828.61 |
| Jan. 9, 1948 | Dues | 1,226.00 | |
| | Ads | 78.94 | |
| | Interest U. S. Bonds | 187.50 | |
| | Subscriptions | 15.00 | |
| | Exhibits | 521.50 | 2,028.94 |
| Jan. 20, 1948 | Dues | 426.00 | |
| | Ads | 890.73 | |
| | Subscriptions | 12.00 | |
| | Exhibits | 525.00 | 1,853.73 |
| Feb. 17, 1948 | Dues | 1,600.00 | |
| | Ads | 1,054.79 | |
| | Subscriptions | 5 50 | |
| | Exhibits | 322.00 | 2,982.29 |
| Mar. 15, 1948 | Dues | 6,024.00 | |
| | Ads | 968.91 | |
| | Interest U. S. Bonds | 187.50 | |
| | Subscriptions | 14.00 | 7,194.41 |
| | | | $35,270.92 |

MEDICAL ASSOCIATION OF GEORGIA

*Disbursements Itemized*

April 1, 1947 to March 31, 1948

| *Check Number* | *Name* | *Amount* |
|---|---|---|
| 4837 | Edgar D. Shanks, M. D. Travel; incidentals and expense in connection with Committee on Public Policy and Legislation May 1, 1946 to April 1947 | $342.00 |
| 4838 | Spencer A. Kirkland, M. D. Expense in connection with Committee on Public Policy and Legislation | 50.00 |
| 4839 | Edgar H. Greene, M.D. Expense in connection with Committee on Public Policy and Legislation | 50.00 |
| 4840 | J. L. Campbell, M. D. Expense in connection with Committee on Public Policy and Legislation | 50.00 |
| 4841 | Southern Bell Telephone & Telegraph Company Service to March 21, 1947 | 10.32 |
| 4842 | Atlanta Linen Service Linen Service February and March 1947 | 6.20 |
| 4843 | Southern Press Clipping Bureau Clippings furnished during January, February and March 1947 | 15.00 |
| 4844 | Ernest P. Tomlinson Engraving President's key | 3.10 |
| 4845 | Charles F. Richardson & Co. Printing 5000 enclosures to mail with membership cards | 17.50 |
| 4846 | Franklin Printing & Mfg. Co. Printing and mailing 2500 copies of The Journal, March 1947 | 770.82 |
| 4847 | Franklin Printing & Mfg. Co. Printing 900 programs for the Ninety-Seventh Annual Session of the Medical Association of of Georgia, Augusta $186.50<br>Printing 200 programs for the Woman's Auxiliary to the Medical Association of Georgia, Augusta 69.50 | 256.00 |
| 4848 | Underwood Corporation Two Underwood Standard Typewriters S-11 6137215—6137208 F $148.76 each $297.52 less 5 per cent $14.88 | 282.64 |
| 4849 | Addressograph-Multigraph Corporation Service on two machines and supplies for 2 quarters | 26.41 |
| 4850 | Lon F. Livingston, Postmaster Deposit for postage due | 20.00 |
| 4851 | Thompson Engraving Co. Engraved letterheads and envelopes, 2000 each for President Steve P. Kenyon, Dawson | 58.41 |
| 4852 | Artcraft Engraving Company Cuts of illustration for The Journal | 155.21 |
| 4853 | The Sheraton Bon Air Miscellaneous expenses for technical exhibits | 125.00 |
| | Check returned—Hall County Medical Society—no signature—made good later | 75.00 |
| 4854 | Mrs. Roy Silvey Help at registration desk | 25.00 |
| 4855 | Jimmy Coones Help for Augusta session 1947 | 15.00 |
| 4856 | J. W. Connell Help for Augusta session 1947 | 15.00 |
| 4857 | C. C. Stewart Help for Augusta session 1947 | 15.00 |
| 4858 | W. E. Johnson Help for Augusta session 1947 | 15.00 |

4859—J. D. Grant
Expenses scientific and technical exhibits, Augusta session 1947 ..... 150.00

4860—Cash
Expenses at Bon Air Hotel, Augusta session 1947 ..... 25.00

4861—Sheraton Bon Air Hotel
For rooms invited guest speakers, secretarial help, reporter, police hire, etc. for the Ninety-Seventh Annual Session of the Medical Association of Georgia ..... 241.82

4862—Dr. R. A. Vonderlehr
Guest speaker for the Ninety-Seventh Annual Session of the Medical Association of Georgia ..... 50.00

4863—Lon F. Livingston, Postmaster
Postage ..... 38.00

4864—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer April less income tax withheld from April salary ..... 238.60

4865—Viola Berry
Salary for Executive Secretary April 1947, less income tax withheld from April salary ..... 202.20

4866—Steve P. Kenyon, M. D.
Honorarium for President 1947-1948 ..... 300.00

4867—Member
Pension from Benevolent Fund ..... 40.00

4868—J. D. Grant
Expenses for supervision and labor in connection with technical and scientific exhibits Augusta session 1947 ..... 221.97

4869—H. L. Howard
For hauling material for scientific exhibit Milner to Augusta and return to Milner warehouse ..... 176.00

4870—Spears Sign Service
Making 22 signs for scientific and technical exhibitors Augusta session 1947 ..... 18.00

4871—Lane Electric Co.
For expenses in connection with labor and material to wire and remove wiring at Bon Air Hotel at Augusta session 1947 ..... 139.65

4872—Woodward Lumber Co.
Material for building booths for scientific and technical exhibitors at Augusta session 1947 ..... 42.80

4873—J. H. Duggan, Jr. & Associates
Expenses in connection with Committee of Prepayment Medical Plans meeting ..... 93.45

4874—Dr. B. H. Minchew
Expenses in connection with Committee of Prepayment Medical Plans meeting ..... 21.40

4875—Southern Bell Telephone & Telegraph Company
Service to April 21, 1947 ..... 7.99

4876—Atlanta Linen Service
Linen service for April 1947 ..... 3.10

4877—The Western Union Telegraph Co.
Telegrams ..... 12.71

4878—Franklin Printing & Mfg. Co.
Printing and mailing 2475 copies of The Journal April 1947 ..... 656.71

4879—Arteraft Engraving Co.
Cuts of illustration for The Journal ..... 7.40

4880—Atlanta Envelope Co.
Printing 10,000 regular envelopes ..... 32.52

4881—Lipscomb-Ellis Co.
Bonds for Secretary-Treasurer, FB-98062 and Executive Secretary, FB-161790 for one year ..... 10.00

4882—Olin H. Weaver, M. D.
Payment on expenses as delegate to A. M. A. 1947 session, Atlantic City ..... 200.00

4883—Allen H. Bunce, M. D.
Payment on expenses as delegate to A. M. A. 1947 session Atlantic City ..... 200.00

4884—B. H. Minchew, M. D.
Payment on expenses as delegate to A. M. A. 1947 session Atlantic City ..... 200.00

4885—Fulton County Medical Society
Gift to library of the Fulton County Medical Society, period May 23, 1947 to May 23, 1948 ..... 500.00

4886—Lon F. Livingston, Postmaster
Postage ..... 30.00

4887—Edgar D. Shanks, M.D.
Payment on expenses as Secretary-Treasurer to A.M.A. 1947 session Atlantic City ..... 200.00

4888—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer May 1947, less income tax withheld from May salary ..... 238.60

4889—Viola Berry
Salary for Executive Secretary May 1947, less income tax withheld from May salary ..... 202.20

4890—Member
Pension from Benevolent Fund ..... 40.00

4891—Mrs. Joe Bruker
Music for Memorial Exercises held at the Augusta meeting April 24, 1947 ..... 10.00

4892—Robert Watson
Music for Memorial Exercises held at the Augusta meeting, April 24, 1947 ..... 10.00

4893—Richmond County Medical Society
Refund for rental of truck used during Augusta session of the Medical Association of Georgia ..... 9.00

4894—Southern Bell Telephone & Telegraph Company
Service to May 21, 1947 ..... 3.32

4895—Atlanta Linen Service
Linen service for May 1947 ..... 3.10

4896—The Western Union Telegraph Co.
Telegrams ..... 1.31

4897—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal May 1947 ..... 660.00

4898—Carithers-Wallace-Courtenay, Inc.
Office supplies ..... 19.20

4899—Arteraft Engraving Co.
Cuts of illustration for The Journal ..... 16.84

4900—Associated Mutuals, Inc.
Policy No. GP. 131785—insurance on cameras and projectors for one year from June 21, 1947 ..... 51.00

4901—Lon F. Livingston, Postmaster
Postage ..... 40.00

4902—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer June 1947, less income tax withheld from June salary ..... 238.60

4903—Mrs. G. R. Sims
Extra secretarial help April 1 through June 30, 1947 ..... 75.00

4904—Viola Berry
Salary for Executive Secretary June 1947, less income tax withheld from June salary ..... 210.80

4905—Viola Berry
Expenses in connection with 97th annual session ..... 25.00

4906—Member
Pension from Benevolent Fund ..... 40.00

4907—Eddie Thompson
Janitor service January 1 through June 30, 1947 ..... 32.00

4908—Collector of Internal Revenue, Atlanta, Income tax withheld from salaries April, May and June 1947:
Edgar D. Shanks, M.D. ..... $34.20
Viola Berry ..... 69.80 104.00

4909—Southern Bell Telephone & Telegraph Company
Service to June 21, 1947 ..... 8.97

4910—Atlanta Linen Service
Linen service for June 1947 ..... 3.10
4911—The Western Union Telegraph Co.
Telegrams ..... 1.76
4912—Southern Press Clipping Bureau
Clipping service furnished April, May and June 1947 ..... 15.00
4913—Atlanta Envelope Co.
Printing 24,900 Kraft 20 open end envelopes for mailing The Journal ..... 190.73
4914—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal June 1947 ..... 872.50
4915—Franklin Printing & Mfg. Co.
Printing 2000 roll of members ruled forms ..... 49.75
4916—Grover Middlebrooks, Attorney
Retainer fee for attorney July 1 through December 31, 1947 ..... 500.00
4917—Dr. John L. Elliott
Stenographic work in connection with reference committee work at the 97th Annual Session of the Medical Association of Georgia ..... 5.00
4918—Register of Copyrights
Deposit to pay copyright fees of The Journal ..... 24.00
4919—W. T. Smith
Overhauling, repairing and new platen on Underwood typewriter No.4753895-11 ..... 9.50
4920—Franklin Printing & Mfg. Co.
Printing 400 copies of 1947-48 Officers and Committees books—12 pages ..... 39.00
4921—Miss Mary Robinson
Stenographic report of the Augusta session, April 22-25, 1947, of general meetings, House of Delegates, and Minutes of Council ..... $300.00
Postage and express on transcript ..... 3.37 303.37
4922—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer July 1947, less income tax withheld from July salary ..... 238.60
4923—Viola Berry
Salary for Executive Secretary July 1947, less income tax withheld from July salary ..... 210.80
4924—Member
Pension from Benevolent Fund ..... 40.00
4925—Lon F. Livingston, Postmaster
Postage ..... 30.00
4926—Southern Bell Telephone & Telegraph Company
Service to July 21, 1947 ..... 8.07
4927—Atlanta Linen Service
Linen service for July 1947 ..... 3.10
4928—Lon F. Livingston, Postmaster
Deposit to cover mailings of The Journal ..... 100.00
4929—Southern Stamp & Stencil Co.
Making 3 stamps ..... 4.25
4930—Carithers-Wallace-Courtenay, Inc.
Office supplies ..... 5.25
4931—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal July 1947 ..... 867.50
4932—Artcraft Engraving Co.
Cuts of illustration for The Journal ..... 16.72
4933—Addressograph-Multigraph Corporation
Quarterly inspection of machines and supplies ..... 13.25
4934—Associated Mutuals, Inc.
Fire insurance on office furniture, fixtures and books—one year—$2000 ..... 3.38
4935—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer August 1947, less income tax withheld from August salary ..... 238.60
4936—Viola Berry
Salary for Executive Secretary August 1947, less income tax withheld from August salary ..... 210.80
4937—Member
Pension from Benevolent Fund ..... 40.00
4938—Lon F. Livingston, Postmaster
Postage ..... 40.00
4939—Southern Bell Telephone & Telegraph Company
Service to August 21, 1947 ..... 6.90
4940—Atlanta Linen Service
Linen service for August 1947 ..... 3.10
4941—Southern Press Clipping Bureau
Clippings furnished during July and August 1947 ..... 10.00
4942—Carithers-Wallace-Courtenay, Inc.
Office supplies ..... 4.00
4943—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal, August 1947 ..... 1,062.50
4944—Franklin Printing & Mfg. Co.
Reprints of the Fee Schedule 4000 ..... 81.50
4945—Artcraft Engraving Co.
Cuts of illustration for The Journal ..... 22.36
4946—A. B. Dick Co.
Semi-annual charges on mimeograph cleaning and lubrication order ..... 12.00
4947—Richmond County Medical Society
Expenses in connection with the annual session of the Medical Association of Georgia, 1947, paid by Richmond County Medical Society ..... 35.00
4948—Lon F. Livingston, Postmaster
Postage ..... 40.00
4949—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer September 1947, less income tax withheld from September salary ..... 238.60
4950—Mrs. G. R. Sims
Extra secretarial help July 1 through September 30, 1947 ..... 75.00
4951—Viola Berry
Salary for Executive Secretary September, 1947, less income tax withheld from September salary ..... 210.80
4952—Member
Pension from Benevolent Fund ..... 40.00
4953—The Citizens & Southern National Bank
Annual rental on safe deposit box 7136 including U. S. tax of 20 per cent ..... 6.00
4954—Collector of Internal Revenue, Atlanta
Income tax withheld from salaries July, August and September 1947:
Edgar D. Shanks, M. D. ..... $34.20
Viola Berry ..... 72.60 106.80
4955—Viola Berry
Commission on local ads October 1, 1946 through September 30, 1947 ..... 238.47
4956—Southern Bell Telephone & Telegraph Company
Service to September 21, 1947 ..... 10.58
4957—Dr. Spencer A. Kirkland
Expenses in collection with meeting of Council on Medical Service A. M. A. Oct. 8, 1947 ..... 28.75
4958—Atlanta Linen Service
Linen service September 1947 ..... 3.10
4959—Carithers-Wallace-Courtenay, Inc.
Office supplies ..... 5.70
4960—The Western Union Telegraph Co.
Telegrams ..... 24.15
4961—James Y. Wilson
Engraving on the Hardman loving cup, the award to Dr. Allen H. Bunce ..... 20.25

4962—Southern Press Clipping Bureau
Clippings furnished during September and October 1947 ..... 10.00

4963—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal September 1947 ..... 922.25

4964—Searcy and Co.
Premium on $500 fire insurance on lumber and other equipment for scientific exhibits ..... 11.50

4965—Darby Printing Co.
Printing 500 4-page programs for Southeastern Regional Conference on the Council on Medical Service A. M. A. ..... 23.65

4966—Woman's Auxiliary, Medical Association of Georgia, by authority of the Council
October 7, 1947 ..... 500.00

4967—Artcraft Engraving Co.
Cuts of illustrations for The Journal ..... 84.04

4968—Southern Bell Telephone & Telegraph Company
Long distance calls ..... 4.25

4969—Edgar D. Shanks, M. D.
Secretary-Treasurer salary for October 1947, less income tax withheld from October salary ..... 238.60

4970—Viola Berry
Salary for Executive Secretary October 1947, less income tax withheld from October salary ..... 210.80

4971—Member
Pension from Benevolent Fund ..... 40.00

4972—Lon F. Livingston, Postmaster
Postage ..... 40.00

4973—Southern Bell Telephone & Telegraph Company
Service to October 21, 1947 ..... 35.25

4974—Atlanta Linen Service
Linen service for October 1947 ..... 3.10

4975—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal October 1947 ..... 835.50

4976—Franklin Printing & Mfg. Co.
Reprints 200 "The Later Years", Dr. Edward L. Bortz, Philadelphia ..... 51.00

4977—Artcraft Engraving Co.
Cuts of illustration for The Journal ..... 13.36

4978—Addressograph-Multigraph Corporation
Addressograph machines quarterly inspection and supplies ..... 13.47

4979—Pig'n Whistle Sandwich Shop, Inc.
Expenses in connection with call meeting of Council, Atlanta, November 16, 1947 ..... 38.05

4980—Dr. J. Victor Roule
Expenses for attending call meeting of Council, Atlanta, November 16, 1947 ..... 7.02

4981—Lon F. Livingston, Postmaster
Postage ..... 40.00

4982—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer November 1947, less income tax withheld from November salary ..... 238.60

4983—Viola Berry
Salary for Executive Secretary November 1947, less income tax withheld from November salary ..... 210.80

4984—Member
Pension from Benevolent Fund ..... 40.00

4985—Grover Middlebrooks, Attorney
Expenses in re: Mrs. G. T. Phillips vs. Dr. Golden Battey and Dr. J. P. Hitchcock ..... $ 6.43
Expenses in re: Mrs. Merrill H. Jones vs. D. E. E. Moseley (outstanding) ..... 89.52 95.95

4986—Ansley Hotel
Public Policy and Legislation expense ..... 6.25

4987—Southern Bell Telephone & Telegraph Company
Service to November 21, 1947 ..... 11.88

4988—Atlanta Linen Service
Linen service for November 1947 ..... 3.10

4989—The Western Union Telegraph Co.
Telegram ..... 1.09

4990—Ivan Allen Marshall Co.
Floor plans 110 for technical exhibits annual session of the Medical Association of Georgia 1948 ..... 13.20

4991—Southern Press Clipping Bureau
Clippings furnished during November and December 1947 ..... 10.00

4992—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal November 1947 ..... 833.00

4993—Chas. F. Richardson & Co.
Furnishing and printing 2000 postal cards for scientific work ..... 28.75

4994—J. B. Richards Printing Co.
Membership cards:
200 1947 cards ..... $ 2.50
2200 1948 cards ..... 27.50 30.00

4995—Addressograph-Multigraph Corporation
Addressograph supplies ..... 2.53

4996—Artcraft Engraving Co.
Cuts of illustration for The Journal ..... 41.88

4997—Carithers-Wallace-Courtenay, Inc.
Office supplies ..... 11.30

4998—J. D. Grant
Drawing floor plan for technical exhibits 25.00

4999—Mrs. G. R. Sims
For extra secretarial work to Dec. 31, 1947 ..... 175.00

5000—Viola Berry
In appreciation, Christmas 1947 ..... 200.00

5001—Olin H. Weaver, M. D.
Payment on expenses as delegate to interim session A. M. A., Cleveland, 1948 200.00

5002—Allen H. Bunce, M. D.
Payment on expenses as delegate to interim session A. M. A., Cleveland, 1948 200.00

5003—B. H. Minchew, M. D.
Payment on expenses as delegate to interim session A.M.A., Cleveland, 1948 200.00

5004—Eddie Thompson
Janitor service to Dec. 31, 1947 ..... 40.00

5005—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer December 1947, less income tax withheld from December salary ..... 238.60

5006—Viola Berry
Salary for Excecutive Secretary December 1947, less income tax withheld from December salary ..... 210.80

5007—Member
Pension from Benevolent Fund ..... 40.00

5008—Lon F. Livingston, Postmaster
Postage ..... 40.00

5009—Collector of Internal Revenue, Atlanta
Income tax withheld from salaries, October, November and December 1947:
Edgar D. Shanks, M. D. ..... $34.20
Viola Berry ..... 72.60 106.80

5010—Federal Reserve Bank, Atlanta
One $5,000 U. S. Government Bond, Series G, and one $10,000 U. S. Government Bond, Series G ..... 15,000.00

5011—Southern Bell Telephone & Telegraph Company
Service to December 21, 1947 ..... 10.42

5012—Atlanta Linen Service
Linen service for December 1947 ..... 3.10

5013—The Western Union Telegraph Co.
Telegram 1.09

5014—John H. Harland Co.
Lithograph letterheads for mimeograph —10,000 72.00

5015—Atlanta Envelope Co.
Printed 10,000 No. 10 envelopes 46.90

5016—Franklin Printing & Mfg. Co.
Printing and mailing 2600 copies of The Journal December 1947 1,046.30

5017—Artcraft Engraving Co.
Cuts of illustration for The Journal 31.16

5018—Grover Middlebrooks, Attorney
Retainer fee January 1, through June 30, 1948 500.00

5019—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer January 1948, less income tax withheld from January salary 230.70

5020—Viola Berry
Salary for Executive Secretary 1948, less income tax withheld from Jnauary salary 210.80

5021—Member
Pension from Benevolent Fund 40.00

5022—Lon F. Livingston, Postmaster
Postage 40.00

5023—Lon F. Livingston, Postmaster
Postage due deposit 20.00

5024—Southern Bell Telephone & Telegraph Company
Service to January 21, 1948 9.60

5025—Atlanta Linen Service
Linen service for January 1948 3.10

5026—Southern Press Clipping Bureau
Clippings furnished during January and February 1948 10.00

5027—Carithers-Wallace-Courtenay, Inc.
Office supplies 7.55

5028—Franklin Printing & Mfg. Co.
Printing and mailing 2500 copies of The Journal January 1948 845.75

5029—Artcraft Engraving Co.
Cuts of illustration for The Journal 23.38

5030—A. B. Dick Co.
Mimeograph stencil sheets 3.50

5031—Addressograph-Multigraph Corporation
Quarterly inspection for addressograph machines 11.00

5032—Lon F. Livingston, Postmaster
Postage 40.00

5033—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer February 1948, less income tax withheld from February salary 230.70

5034—Viola Berry
Salary for Executive Secretary February 1948, less income tax withheld from February salary 210.80

5035—Member
Pension from Benevolent Fund 40.00

5036—Lon F. Livingston, Postmaster
Postage 30.00

5037—Southern Bell Telephone & Telegraph Company
Service to February 21, 1948 9.96

5038—Atlanta Linen Service
Linen service for February 1948 3.10

5039—The Western Union Telegraph Co.
Telegrams 14.79

5040—The Rosary Florist
Flowers 25.00

5041—Franklin Printing & Mfg. Co.
Printing and mailing 2550 copies of The Journal February 1948 748.27

5042—Franklin Printing & Mfg. Co.
Printing 2000 statements 15.25

5043—Ansley Hotel
Public Policy and Legislation expenses 5.65

5044—Calhoun Company
Repairs on Victor Model 40—No. 68674 2.00

5045—A. B. Dick Co.
Semi-annual charges on mimeograph cleaning and lubricating order 12.00

5046—Artcraft Engraving Co.
Cuts of illustration for The Journal 66.24

5047—Edgar D. Shanks, M. D.
Salary for Secretary-Treasurer March 1948, less income tax withheld from March salary 230.70

5048—Viola Berry
Salary for Executive Secretary March 1948, less income tax withheld from March salary 210.80

5049—Member
Pension from Benevolent Fund (outstanding) 40.00

5050—Lon F. Livingston, Postmaster
Postage (outstanding) 50.00
Exchange on non-par checks 9.42

Total . . . $41,403.86

## HEALTHGRAMS

The curious thing is that legislators—and for that matter people generally—seem to feel that tuberculosis is someone else's disease and is paid for by the victim and his family. The idea is completely wrong. Tuberculosis has to be paid for by society. The only choice is how the bill will be paid. James H. Hutton, M.D., Illinois M. J., April, 1947.

* * *

It is short-sighted to spend a great deal of time and money in developing an excellent medical program for the treatment of tuberculous patients without at the same time providing some form of supervised activity for patients with a favorable prognosis to enable them to bridge the gap between the sheltered life in a sanatorium and the life of the work-a-day world. Ernest S. Mariette, M. D., Am. Rev. Tuberc., Jan., 1947.

* * *

A diabetic patient beginning to show unusual features, and particularly to our experience recurrent colds, or persistent head colds, should be submitted to x-ray examination of the chest; a search for tubercle bacillus in sputum and fasting-stomach contents should be made, and the blood sedimentation rate ascertained. W. R. Gauld, M.D. and A. Lyall, M.D., Brit. M. J., May 17, 1947.

* * *

The ultimate outcome in a minimal case can be favorably or unfavorably influenced by the type of follow-up observation and post-sanatorium living conditions. One must guard against relaxation of close medical supervision, an unregulated daily work tolerance, excessive social activities and economic and environmental deficiencies. I. D. Bobrowitz, M.D., Allan Hurst, M.D., and Margaret Martin, Am. Rev. Tbc., Aug., 1947.

* * *

A hospital would not fail to provide a patient with a routine urinalysis and yet it is stated that only 0.4 per cent of cases of diabetes are discovered by such a routine procedure. The amount of significant tuberculosis discovered by providing a routine x-ray is much larger. It is also said that less than 1 per cent of patients provided a routine blood count have a blood dyscrasia. Less syphilis is found by providing routine Wassermanns than significant tuberculosis by providing a routine chest x-ray. Allan Filek, M.D., 1947 Trans., NTA.

# WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

*Officers*
1948 - 1949

President—Mrs. Sam Anderson, State Hospital, Milledgeville.
President Elect—Mrs. J. Harry Rogers, 61 Montclair Drive, Atlanta.
First Vice President—Mrs. J. R. S. Mays, 195 Elizabeth Place, Macon.
Second Vice President—Mrs. T. A. Peterson, 1223 East 54th St., Savannah.
Third Vice President—Mrs. B. E. Collins, 2008 Cherokee Drive, Waycross.
Recording Secretary—Mrs. W. D. Hall, Calhoun.
Corresponding Secretary—Mrs. Robert B. Crichton, State Hospital, Milledgeville.
Treasurer—Mrs. Richard K. Winston, 807 Wilson Ave., Tifton.
Parliamentarian—Mrs. Bruce Schaefer, 110 East Whitman St., Toccoa.
Historian—Mrs. W. J. Williams, 2905 Henry St., Augusta.

*Chairmen of Standing Committees*

Achievement Award—Mrs. Ralph B. McCord, Rome.
Archives—Mrs. Eustace Allen, 18 Collier Road, Atlanta.
Bulletin—Mrs. Walker Curtis, 302 Rugby Ave., College Park.
Doctors' Day—Mrs. Robert B. Greenblatt, Bransford Rd., Augusta.
Mrs. J. Bonar Whites Exhibit and Scrapbook Awards—Mrs. J. L. Gallemore, Perry.
Press and Publicity—Mrs. Clifton G. Kemper, 956 Stovall Blvd. N. E., Atlanta.
Public Relations—Mrs. Shelley Davis, 1259 Peachtree Battle Ave., N. W., Atlanta.
Legislation—Mrs. John Elliott, 210 East Huntingdon, Savannah.
Mrs. James N. Brawner Trophy—Mrs. W. G. Elliott, 1010 Lumpkin St., Cuthbert.
Revisions—Mrs. Lee Howard, 625 East 44th St., Savannah.
Research in Romance of Medicine—Mrs. Edgar H. Greene, 1442 W. Wesley Rd., N. W., Atlanta.
Student Loan Fund—Mrs. J. Lon King, 223 Buford Place, Macon.
Visual Education—Mrs. Ralph Fowler, 303 McDonald St., Marietta.

*Advisory Committee*

Dr. Chas. H. Richardson, *Chairman*, Macon.
Dr. James N. Brawner, Atlanta.
Dr. Sam Anderson, Milledgeville.
Dr. Shelley C. Davis, Atlanta.
Dr. R. C. McGahee, Augusta.
Dr. W. Bruce Schaefer, Toccoa.
Dr. Olin S. Cofer, Atlanta.
Dr. Enoch Callaway, LaGrange.

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## MINUTES OF THE TWENTY-THIRD ANNUAL CONVENTION, ATLANTA, APRIL 28, 1948

The twenty-third annual convention of the Woman's Auxiliary to the Medical Association of Georgia was called to order by the president, Mrs. W. G. Elliott, at 10:00 A. M. at the Academy of Medicine, Atlanta, April 28, 1948.

The invocation was offered by Mrs. James N. Brawner. Mrs. J. R. S. Mays led the meeting in the pledge of loyalty.

Welcome to the guests was extended by Mrs. M. T. Edgerton, president of the Fulton County Medical Society Auxiliary. Mrs. B. E. Collins, of Waycross, responded.

Distinguished guests and officers were introduced by Mrs. E. H. Greene.

Dr. Steve P. Kenyon, president of the Medical Association of Georgia, was introduced and addressed the Auxiliary. He commended the Auxiliary on its work of the past and asked for our continued cooperation. He stated that the job ahead was not so much one of medical science as a social and economic one. He told of the conference that the Governor had called of "100 representative citizens" to study needs of health in Georgia and bring these facts to the larger meeting in the fall so that recommendations can be made and the next Legislature can put them into law and bring Georgia to its rightful place in health.

He asked that the Auxiliary continue to carry messages from the medical profession to the people of the State.

Dr. E. H. Greene was introduced and addressed the Auxiliary. He gave Dr. Kenyon credit for having the Governor call the meeting of health in Georgia (March 19-20), as well as the Regional Conference on Medical Services held in Atlanta on October 8, 1947, at which meeting Medical Prepayment Plans were discussed. He stated that no organization was in better position to render a service to the people of the State than the Auxiliary through a health education program. He suggested that we emphasize:

1. Good fellowship and happiness.
2. Doctors' Day.
3. Intensive study of Romance in Medicine.

Dr. Redfearn, chairman of the Advisory Committee to the Auxiliary, was introduced. He expressed his pleasure in working with the Auxiliary. He commended its excellent leadership through the years in carrying out its reason for existence, supporting the activities of the Medical Association of Georgia.

The president then introduced the secretary *pro tem* who is serving in the absence of the secretary.

The parliamentarian, Mrs. R. H. Chaney, read the rules governing the convention procedure.

Mrs. August Turner introduced the pages.

The secretary read the report of the Executive Board including the committees appointed and the recommendation that the appointment of Mrs. Shelley Davis to the Georgia Citizens' Committee be approved, and made a motion that the recommendation be adopted. Mrs. C. W. Roberts seconded the motion and it was carried.

Mrs. Allen Bunce gave the following report on registration: 190 registered, 1 president, 8 past presidents, 1 district manager, 4 delegates and county presidents, 6 alternates, 9 officers.

Mrs. M. T. Edgerton gave a report for the Hospitality Committee.

Reports were given by the following districts and counties:

Third District—Mrs. Albert Bush.
Fifth District—Mrs. B. L. Shackleford.
Sixth District—Mrs. Sam Anderson.
Seventh District—Mrs. W. D. Hall.
Baldwin County—Mrs. Robert Crichton.
Barrow County—Mrs. W. T. Randolph.
Bibb County—Mrs. J. R. S. Mays.
Bulloch-Candler-Evans Counties—Mrs. J. L. Neville.
Chatham County—Mrs. T. A. Peterson.
Cobb County—Mrs. Murl Hagood.
DeKalb County—Mrs. W. P. Smith.
Dodge-Pulaski-Bleckley Counties—Mrs. Albert Bush.
Floyd County—Mrs. Lee Battle.
Fulton County—Mrs. M. T. Edgerton.
Gordon County—Mrs. W. D. Hall.
Muscogee County—Mrs. Carl Smith.
Randolph-Terrell Counties—Mrs. R. B. Martin, III.
Richmond County—Mrs. W. J. Williams.
Sumter County—Mrs. Schley Gatewood.
Stephens County—Mrs. C. L. Ayers.
Tift County—Mrs. R. K. Winston.
Ware County—Mrs. Lee Smith.

The minutes of the second session of the Twenty-second Annual Convention were read and approved.

There being no further business, the president declared the meeting adjourned.

MRS. JOHN L. ELLIOTT, *Secretary Pro Tem.*
MRS. W. G. ELLIOTT, *President*

## SECOND SESSION

The second session of the Twenty-third Annual Convention of the Woman's Auxiliary to the Medical Association of Georgia was called to order by the president, Mrs. W. G. Elliott, at 10:00 A.M., April 29, 1948.

The pledge of allegiance was led by Mrs. W. R. Dancy.

Mrs. Olin S. Cofer, president of the Auxiliary to the Southern Medical Association, addressed the convention, stressing the necessity for putting aside self aggrandizement and working for the good of the whole.

Mrs. Eustace A. Allen, president of the Auxiliary to the American Medical Association, addressed the convention, giving emphasis to the need of a proper interpretation of the medical profession to lay groups, thereby alleviating the threat of socialized medicine.

Mrs. Shelley Davis conducted the Memorial Services very impressively.

A report from the meeting of the Woman's Auxiliary to the American Medical Association was given by Mrs. Bruce Schaefer.

Mrs. Allen Bunce gave the following report on registration: 239 registered; 1 president of the Auxiliary to the American Medical Association, 1 president of the Southern Medical Auxiliary, 1 State president, 11 officers and chairmen, 8 past presidents, 1 district manager, 12 county presidents, 39 delegates and alternates, 4 guests.

There were reports from the following officers and chairmen:

Archives—Mrs. Eustace A. Allen.
Bulletin—Mrs. W. L. Curtis.
Achievement Award—Mrs. W. E. Matthews.
Brawner Trophy—Mrs. Bruce Schaefer.
Research in Romance of Medicine—Mrs. J. L. Gallemore.
Legislation—Mrs. John L. Elliott.
Post-War Planning—Mrs. L. W. Williams.
Student Loan Fund—Mrs. J. Lon King, who reported a balance of $3759 54, April 26, 1948.

Treasurer's report was read by the secretary and directed to be filed.

Corresponding Secretary—Mrs. J. C. Patterson.
President-Elect—Mrs. Sam Anderson.
First Vice-President—Mrs. Shelley Davis.
Second Vice-President—Mrs. W. D. Hall.
Third Vice-President—Mrs. Robert Crichton.

Mrs. W. G. Elliott gave her year's report as president, which was accepted with a rising vote of thanks. The first vice-president, Mrs. Shelley Davis, took the chair while the president gave her report.

Auditing Committee—The Auditing Committee, Mrs. Shelley Davis, chairman, reported the treasurer's report in good order.

Resolutions Committee—Mrs. Robert Crichton, chairman, read a resolution from the Nominating Committee relative to the appointing of a nominating committee prior to the convention. This matter was referred to the Committee on Revisions to the Constitution.

James N. Brawner Award—Mrs. Bruce Schaefer reported that this award had been given to Tift County, with honorable mention to Bibb and Fulton.

Achievement Award—Mrs. W. E. Matthews reported that this award had been given to Tift County, with honorable mention to Fulton County.

J. Bonar White Scrapbook and Exhibit Award was given to Tift County with honorable mention to Richmond County.

Poster Award was given to Fulton County, with Chatham and Tift counties receiving honorable mention.

Courtesy Committee—This report was given by Mrs. T. A. Peterson.

The president appointed the following committee to publish the minutes of the convention: Mrs. T. A. Peterson, Mrs. L. W. Williams, Mrs. Joseph Pacifici.

The president then declared the meeting open for business.

The minutes of the first session of the Twenty-third Annual Convention were read and approved.

Mrs. Bruce Schaefer, chairman of the Nominating Committee gave the following report:

President—Mrs. Sam Anderson, Milledgeville.
President-Elect—Mrs. J. Harry Rogers, Atlanta.
First Vice-President—Mrs. J. R. S. Mays, Macon.
Second Vice-President—Mrs. T. A. Peterson, Savannah.
Third Vice-President—Mrs. B. E. Collins, Waycross.
Recording Secretary—Mrs. W. D. Hall, Calhoun.
Treasurer—Mrs. R. K. Winston, Tifton.
Historian—Mrs. W. J. Williams, Augusta.

There being no nominations from the floor, the secretary was instructed to cast the ballot and declared the slate of officers as presented by the Nominating Committee elected.

Mrs. Eustace Allen, president of the Auxiliary to the American Medical Association, installed the officers. Mrs. W. G. Elliott presented the gavel to the incoming president, Mrs. Sam Anderson.

The past-president's pin was presented to Mrs. W. G. Elliott, the outgoing president, by Mrs. Joseph Yampolsky.

The president announced a Post-Convention Board Meeting for Friday morning, April 30, at 10:00 o'clock, at the Academy of Medicine. She announced the appointment of the following officers: Corresponding Secretary, Mrs. Robert Crichton; Parliamentarian, Mrs. Bruce Schaefer.

The following delegates were appointed to the Annual Convention of the Auxiliary to the American Medical Association: Mrs. W. G. Elliott, Mrs. Harry Rogers, Mrs. Olin Cofer, Mrs. Robert Crichton, and Mrs. Sam Anderson.

There being no further business, the president declared the Twenty-Third Annual Convention of the Woman's Auxiliary to the Medical Association of Georgia adjourned at 12:30 P. M.

MRS. JOHN L. ELLIOTT,
*Recording Secretary Pro Tem*
MRS. W. G. ELLIOTT, *President*

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The Medical Association of Georgia centennial session will be held at the Hotel DeSoto, Savannah, May 10-13, 1949.

## NEWS ITEMS

Dr. V. F. Bazilauskas, 1605 Roswell Street, Marietta, recently received nationwide recognition for his production of medical educational films. Dr. Bazilauskas, who practices medicine in Marietta and works with the Communicable Disease Center of the U. S. Public Health Service in Atlanta, writes and produces the films for medical schools. His latest work, "The Developmental Pathology of Pulmonary Tuberculosis", was presented at the annual meeting of the American Association of Anatomists and proved a success. The association requested more films of the same type to co-ordinate the various clinical subjects taught in medical schools with the basic sciences.

* * *

Dr. Helen Bellhouse, Thomasville, after a two-month vacation will assume the position of Regional Director of the Maternal Child Health Program working with the State Department of Public Health. Her territory will include South Georgia. No change in residence is anticipated, although the central office will be located in Albany. Dr. John Morton, who has been associated with Dr. Bellhouse for the past six months will be her successor in the practice of pediatrics. Dr. Morton is a graduate of the University of Georgia School of Medicine, Augusta, and there completed his three years of specialized training for pediatrics. He served four and a half years in the U. S. Army Medical Corps, prior to completion of his training. He has been accepted on the pediatric staff of John D. Archbold Hospital, Thomasville.

* * *

Dr. C. C. Brannen, Moultrie, recently attended the heart clinic sponsored by Emory University Hospital, Lawson VA Hospital and Grady Hospital, held at Grady Memorial Hospital, Atlanta.

* * *

Dr. J. G. Brantley, Wrightsville physician, completed 36 years of medical service to Wrightsville and Johnson County on June 1. A native of Johnson County and the son of the late Joseph E. Brantley and Mrs. Brantley, he began the practice of medicine in Wrightsville. He graduated from the Atlanta School of Medicine in 1912. He has done post-graduate work at Harvard University in physical and laboratory diagnosis under Dr. Richard C. Cabot, at the American Hospital in Chicago, in operative surgery and surgical gynecology, and at the Mayo Clinic, Rochester Minn.

* * *

The Bibb County Medical Society held its regular meeting at Ridley Hall, Macon, June 1. Program: "Uterine Bleeding", Dr. Tom Harrold. Dr. A. M. Phillips, secretary.

* * *

Dr. Henry Bridges, Bainbridge, recently purchased an interest in the Bainbridge Hospital, Bainbridge, and will be associated with Dr. Geo. L. Epps and Dr. Charles G. Belleville. Dr. Bridges will still maintain his office in the Custer Building.

* * *

Dr. S. D. Brown, well known Georgia surgeon and owner of Brown's Hospital, Royston, was among the distinguished visitors in Winder recently to witness the Master Farm Demonstration. He has extensive farming interests in Hart County, and has been engaged in an active study of the land for many years.

* * *

Cairo has three new and modern clinics, recently opened. Drs. A. B. and Max Reynolds have completed their attractive clinic, completely equipped and located on First Avenue, N. E., Cairo. Dr. A. W. Rehberg, whose office has been in the Grady County Hospital, has completed an attractive clinic on Second Street, S. E., just South of the hospital. Dr. J. V. Rogers will be associated with him. The former Wright Hospital Building, just across Second Street, S. E. from the hospital, is being extensively refinished for Dr. Sidney L. Hancock. All Cairo physicians will share equally the facilities of Grady County Hospital, which has been extensively improved to provide Grady County with hospital facilities of top rank.

* * *

Dr. Enoch Callaway, LaGrange, one of the South's leaders in the fight against cancer, was recently called to Miami to give his advice and help guide plans for an extensive cancer control program in Miami. Dr. Callaway told a group of 35 greater Miami civic and business leaders that 12 years' experience had convinced Troup County cancer fighters that the first step in an effective cancer control program is a sustained educational effort to teach people the essential facts about cancer and to convince them that in its early stages the disease usually is curable.

* * *

Dr. Robert B. Dienst, Augusta, of the University of Georgia School of Medicine, was recently granted $5,000 for medical research. Dr. Dienst was allocated the fund to study laboratory procedure for an early diagnosis of chancroidal infection. The grant came from the John and Mary H. Markle foundation which will support scholars in medical research during the next five years.

* * *

Dr. L. P. Elam, Jr., Sparta, has completed his internship, after practicing medicine in Sparta last summer, and has returned to Sparta to practice medicine. His offices are located in the A. K. Chamblee Building, Sparta.

* * *

The Georgia Medical Society held its regular meeting at the society's hall, 612 Drayton St., Savannah, June 6. Dr. M. J. Epting, president, presided. Dr. Robert Gottschalk presented a paper on "Surgery of the Sympathetic Nervous System." Dr. Stephen J. Lange, secretary.

* * *

Drs. W. L. Champion, Major Fowler and R. C. Coleman, Jr., Atlanta, announce the association of Dr. Thomas J. Florence, Doctors Building, 490 Peachtree Street, N. E., Atlanta. Practice limited to urology.

* * *

Dr. Allan M. Cole, formerly of Warner Robins, announces the removal of his offices to the Professional Building, 810 Mulberry Street, Macon. Practice of medicine and cardiology.

* * *

Dr. William E. Goodyear, Atlanta, announces his association with Dr. Donald E. Beard, 233 Doctors Building, 490 Peachtree Street, N. E., Atlanta, for the practice of urology.

* * *

Dr. Robert W. Graves, formerly of Durham, N. C., professor of neurology at Duke University School of Medicine and who has been a member of the faculty since 1936, has resigned to go into private practice of neurology at Rome.

* * *

Dr. A. E. James, Albany physician, recently discussed "Modern Miracles of Surgery" before the Kiwanis Club members at Albany.

* * *

Dr. George M. Lane, formerly of Macon, announces his association with Dr. G. H. Alexander, Alexander Clinic, Forsyth, for the practice of medicine. Dr. Lane is a native of Lincolnton and graduated from the University of Georgia School of Medicine, Augusta, since which time he has served a rotating internship at the Macon Hospital, Macon.

* * *

Dr. J. D. McArthur, Augusta, graduate of the University of Georgia School of Medicine and recently an intern at the University Hospital, announces his association with Dr. H. D. Youmans, Ideal Pharmacy Building, Lyons, for the general practice of medicine.

* * *

Dr. Henry H. McNeely has returned to Toccoa to engage in the practice of medicine and general surgery, with offices in the Terrell Building, Toccoa. Dr. McNeely graduated from the University of Georgia School of Medicine, Augusta, in 1946. He served a rotating

internship at the Jersey City Medical Center and has been recently a surgical resident at Crawford W. Long Hospital, Atlanta.

* * *

Dr. Arthur Merrill, Atlanta, associate professor of medicine at Emory University School of Medicine, recently described the "Emotional Problems in the Practice of Internal Medicine" at the monthly meeting of the Atlanta Mental Hygiene Society held in the Assembly Hall of the Community Planning Council, 11 Pryor Street, Atlanta.

* * *

Dr. J. E. Morris, Douglas, has resigned as Health Commissioner of Coffee, Atkinson and Berrien counties to accept a similar position in Colquitt-Brooks counties, with headquarters at Moultrie.

* * *

Dr. William J. Peeples, LaGrange, Troup County Health Commissioner, addressed the LaGrange Rotary Club luncheon meeting recently. His subject was "Public Health." At the close of his address Dr. Peeples presented a movie made by the North Carolina State Board of Health, entitled "Mr. Smith Wakes Up."

* * *

Dr. Robert E. Shiflet, Toccoa, recently spoke on a radio program—"For the Sake of Your Health," sponsored by the Stephens County Health Department. Dr. Shiflet discussed "Heart Diseases."

* * *

Dr. J. Gregg Smith, formerly of Savannah, was recently appointed Health Commissioner for Hall and Banks counties. Dr. Smith, a native of South Carolina, received his education at the Citadel and the Medical College of Virginia, Richmond, of which he is a graduate. He interned in hospitals at Richmond, Va., and Boston, Mass., and did post-graduate work at the University of California School of Medicine and at Johns Hopkins in Baltimore, Md. He is a veteran of 27 years with the U. S. Navy and served most of this time in the Navy Medical Corps in both American and foreign waters. He served the Medical Corps personnel in the Bureau of Medicine and Surgery, Navy Department, Washington, D. C. Following World War II, he opened an office in Savannah where he practiced medicine until three months ago when he began doing orientation work in the State Department of Public Health.

* * *

The Southern Medical Association announces their forty-second annual meeting will be held in Miami, Fla., October 25-28, 1948. The Executive Committee was unanimous in its acceptance of the invitation of the Dade County Medical Association to meet in Miami.

* * *

Dr. Spotswood Douglas Stoddard, a native of Savannah, announces the opening of his office at 113 East Gwinnett Street, Savannah. Practice limited to internal medicine. He received his medical degree from the University of Virginia in 1941. After a year as intern at St. Elizabeth's Hospital, Richmond, Va., he entered the U. S. Navy, serving from July 1942 to March 1946 in the medical corps. He left active service with the rank of lieutenant commander. Since then he has been assistant resident on internal medicine at the Chesapeake and Ohio Hospital, Clifton Forge, Va.

* * *

Dr. Harold M. Smith, a native of Savannah, was recently appointed county coroner by the Chatham County Commissioners to succeed Dr. John L. Elliott, Savannah, who resigned June 1. Dr. Smith graduated from the University of Georgia School of Medicine, Augusta. Prior to entering the Army, Dr. Smith served his internship at Gracewood, and the University Hospital, Augusta. He was resident surgeon at City Hospital, Columbus, for one year. Dr. Smith's practice consists of the general practice of medicine and general surgery, including diseases of women.

* * *

Dr. P. R. Stewart, Monroe, one of Walton County's leading physicians, recently installed in his offices a combined x-ray and fluoroscope, a basal metabolism machine and an electrocardiograph. This equipment is comparable to that found in the offices of the city physicians, and will be invaluable to Dr. Stewart in his practice.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, June 17. Scientific program: "Practical Pediatrics", Dr. C. Dixon Fowler; "Convulsions in Children", Dr. Rogert W. Dickson; "Emergencies in the Newborn", Dr. T. Boling Gay; "Psychological Care in Infants", Dr. William H. Kiser, Jr.; and "Immunization in Children", Dr. Bagley Benson.

* * *

Dr. Rose A. Lahman, Atlanta, announces the opening of her office at 795 Peachtree Street, N. E., Atlanta. Practice limited to obstetrics, gynecology and endocrinology.

* * *

Dr. Harold B. Levin, Atlanta, announces the opening of his office at suite 349 Doctors Building, 490 Peachtree Street, N. E., Atlanta. Practice limited to diseases of the skin.

* * *

Dr. Virgil P. Sydenstricker, Augusta, has been honored twice by the University of Georgia School of Medicine. The library of the Medical College has increased its collection of portraits of distinguished members of the faculty by adding a portrait of Dr. Sydenstricker, professor of medicine in the Medical School and physician-in-chief at the University Hospital, which occupies a position on the east wall of the main reading room.

Dr. Sydenstricker was chosen also by the editors of The Cadaver, the newspaper published by students of the School of Medicine, as the subject of its first honorary "salute" to members of the faculty and administrative staff of the University of Georgia School of Medicine. The "salute," with a two column picture of Dr. Sydenstricker, has the leading position on the front page of The Cadaver for June. The editorial comment says: "It is only natural that we should choose one so well known and liked as Dr. Sydenstricker, for surely this fine gentleman and brilliant scholar is one of our most outstanding professors."

* * *

The Sixth District Medical Society held its spring meeting at Milledgeville, June 30. Scientific program: "Cystic Tumor of the Thymic Region and Myasthenia Gravis. Report of Case in Which Tumor was Removed", Dr. Charles Fulghum, Milledgeville; "Loeffler's Syndrome. A Report of Two Cases", Drs. Edwin R. Watson, Max Mass and Marvin Harris, all of Macon; "The Personality Background of the Peptic Ulcer Patient", Dr. J. R. S. Mays, Macon; and "The Acute Gallbladder", Dr. M. B. Hatcher, Macon. Officers: Dr. Tom Ross, Macon, president; Dr. Frank Vinson, Fort Valley, vice-president; and Dr. A. M. Phillips, Macon, secretary-treasurer.

* * *

Dr. A. N. Taylor, formerly of Heflin, Ala., announces his association with Dr. J. W. Watts, Jubal Watts Memorial Hospital, Bowdon, for the practice of medicine.

* * *

The Third District Medical Society met at the Americus Country Club, Americus, June 17. Dr. Lee Williams, Cordele, president, called the meeting to order. Invocation by Rev. James H. Wilson, pastor of the first Methodist Church, Americus; Address of Welcome by Dr. Russell Thomas, Americus, president of the Sumter County Medical Society, and Dr. Guy Dillard, Columbus, vice president of the district society, gave the response. Dr. W. G. Elliott, Cuthbert, councilor for the Third District, gave his report. Dr. Enoch Callaway, LaGrange, president-elect of the Medical Association of Georgia, made some remarks. Scientific program: "The Management of Congestive Heart Failure", Dr. Byron Hoffman,

Atlanta; "Streptomycin Treatment of Tuberculosis", Dr. C. M. Murphy, Battey State Hospital, Rome; "The Management of Common Fractures", Dr. Paul Rieth, Atlanta; "Diverticulitis of the Colon with Special References to Surgical Complications", Dr. J. D. Martin, Jr., Atlanta; "Measures for the Relief of Pain in Obstetrics", Dr. Hartwell Boyd, Atlanta. Officers: Dr. Lee Williams, Cordele, president, Dr. Guy Dillard, Columbus, vice president, and Dr. R. C. Pendergrass, Americus, secretary-treasurer.

The Woman's Auxiliary to the Third District Medical Society met at the home of Mrs. R. C. Pendergrass, Americus, June 17. Address of Welcome by Mrs. Herschel Smith, Americus. Mrs. Luther Wolff, Columbus, gave the response. Mrs. John Morgan gave a book review on "Who Walks Alone." Mrs. J. P. Luther, Americus, gave a talk.

* * *

Dr. Frank Thomas, Albany, recently attended a meeting in Atlanta for the furtherance of information concerning infantile paralysis. Dr. Thomas told the Dougherty County Medical Society members of his findings. He also spoke on the subject at Phoebe Putney Hospital to persons interested in learning more about the treatment and control of the dreaded disease. The use of infant and adult iron lungs was demonstrated, also nursing technics.

* * *

The University of Georgia School of Medicine, Augusta, recently sponsored its fifth graduate course in endocrinology. The course was given by Dr. Robert B. Greenblatt and his staff. About 50 physicians registered for the course, from six states and from Canada and Switzerland. Lecturers for the seminar were: Dr. Robert B. Greenblatt, Dr. G. Lombard Kelly, Dr. Edgar R. Pund, Dr. Nathan DeVaughn, all of Augusta, and Col. Charles Leedham, of Oliver General Hospital, Augusta.

* * *

The University of Georgia School of Medicine alumni class of 1900 recently gathered at the Sheraton Bon Air Hotel, Augusta, to celebrate the 48th year in medical practice. Only five of the 14 living members were able to attend the meeting, and they were: Dr. J. M. Byne, Sr., Waynesboro, class president, and at the age of 69 the youngest living member; Dr. J. L. Weeks, Harlem, aged 79, the oldest living member; Dr. J. E. Lanier, Moultrie; Dr. R. E. Mason, Anderson, S. C., the secretary; and Dr. R. F. Godard, Quincy, Fla. Each of these men has engaged constantly in the practice of medicine since his graduation at the turn of the present century. Occupying a place of honor for the alumni meeting was a large oval picture of all the 1900 graduates. As each one died, the class secretary marked him off with a red pencil. The color scheme of this picture is predominantly red. Other living alumni who could not attend the meeting include Dr. J. T. Arnold, Parrott; Dr. George Atwood, Jr., Waycross; Dr. F. N. Clements, Adel; Dr. Eugene B. Elder, St. Augustine, Fla.; Dr. L. Halpert, Duquesne, Pa.; Dr. David S. Knox, Antreville, S. C.; Dr. J. C. Neville, Register; Dr. D. L. Sturkie, North, S. C.; and Dr. R. M. Alexander, Paoli, Okla.

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Dr. Van Teem, Marietta physician, recently addressed the Public Health Nurses of Northwest Region at their meeting held at the Marietta First Methodist Church. Dr. Teem discussed "Rheumatic Fever". A motion picture on the same subject was shown.

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Dr. Ford Ware, Macon physician, recently attended a meeting of the Association of Southern Railway Surgeons, New Orleans, La.

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Dr. Luther M. Vinton and Dr. Paul D. Vella, Atlanta physicians, completed the post-graduate course in endocrinology held recently at the University of Georgia School of Medicine, Augusta.

* * *

Dr. W. C. Waters, Atlanta, announces his resumption of the practice of internal medicine at 756 Cypress Street, N. E., Atlanta.

Dr. Carter Smith, Atlanta, was elected governor for Georgia for the American College of Physicians at the meeting held in San Francisco, April 22. Dr. Smith succeeds Dr. Glenville Giddings, Atlanta, and the term of service is for 3 years.

## OBITUARY

*Dr. James LeRoy Campbell*, aged 77, widely known surgeon, died at his home, 1315 Fairview Road, N. E., Atlanta, June 11, 1948. A native of Fulton County, he had lived in Atlanta nearly all of his life. A graduate of Atlanta Medical College, now Emory University School of Medicine, Atlanta, in 1893, he studied in Europe in 1897. Beginning his practice in Atlanta when modern medical science was still in its infancy, Dr. Campbell saw and aided its progress through the development of anesthesia, clinical surgery and cancer treatment. He was author of numerous articles in professional journals. A tireless cancer fighter, Dr. Campbell was the author of the present State law for the control of cancer. He also established State-aid cancer clinics for the treatment of indigent cancer victims in Georgia. He was founder and director of the Sheffield Cancer Clinic of Atlanta, and was a director of the Atlanta Cancer Detection Clinic. At the time of his death he was chairman of the Executive Committee of the Women's Field Army of American Society for Control of Cancer, a position he had held since 1937. He was a member of the Fulton County Medical Society, the Medical Association of Georgia, the Southern Medical Association, a charter member of the American Board of Surgeons, and a fellow of the American Medical Association. He was a member of Omicron Delta Kappa, Phi Beta Kappa, and Alpha Omega Alpha fraternities. He also was a member of Phi Chi medical fraternity. He was a member of the Trinity Methodist Church. Surviving are his wife; one daughter, Mrs. George M. Ivey, Charlotte, N. C.; a son, Dr. James L. Campbell, Jr., Atlanta, and several grandchildren. Funeral services were held at Spring Hill, with Dr. William V. Gardner officiating. Burial was in West View Cemetery, Atlanta.

* * *

*Dr. Dewey Wardlaw Hammond*, aged 51, prominent LaFayette and Walker County physician, died in a Chattanooga hospital May 13, 1948. Dr. Hammond was educated in the LaFayette schools, took his pre-medical course at Mercer University, Macon, and graduated in medicine from the University of Georgia School of Medicine, Augusta, in 1921. Following his internship at Erlanger Hospital, Chattanooga, Tenn., he located in LaFayette where he engaged in the active practice of medicine until his death. In addition to his practice of medicine, Dr. Hammond was a most successful business man, holding large interests in business enterprises and real estate. He was a member of the LaFayette Baptist Church, the Walker-Catoosa-Dade Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He is survived by his wife, Mrs. Minnie Lee Shattuck Hammond; one son, Dewey W. Hammond, Jr.; mother, Mrs. C. J. Hammond, all of LaFayette; three sisters, Mrs. W. E. McKown and Miss Ruth Hammond, LaFayette, and Mrs. Ray Walls, Atlanta, and four nephews. Funeral services were held at the LaFayette Baptist Church with his pastor, the Rev. E. B. Coon, officiating. The Rev. L. B. Linn assisted. Burial was in LaFayette Cemetery, LaFayette.

* * *

*Dr. Miller Thurman Harrison*, aged 51, prominent gynecologist and obstetrician, died of a heart attack at his home, 1096 East Clifton Road, N. E., Atlanta, June 1, 1948. Dr. Harrison, a native of Zebulon, was graduated from the University of Georgia in 1917, and from Emory University School of Medicine, Atlanta, in 1921. He was a member of the Fulton County Medical Society, having served as secretary-treasurer and also as a member of the board of trustees of that society; Fifth District Medical Society in which he served as secretary for one year; the Medical Association of Georgia, and was a fellow of the American College of Surgeons and

the American Medical Association. He served on the staffs of Grady Memorial, Crawford W. Long Memorial, Georgia Baptist and Emory University hospitals. He was a steward in the Glenn Memorial Methodist Church, of which he was a member. He is survived by his wife, the former Miss Vera Neel, Charles Town, W. Va.; two sons, M. T. Harrison, Jr., and Merritt Neel Harrison, both of Atlanta; his mother, Mrs. Mary Harrison, Atlanta, and a sister, Mrs. Barry Gillespie, Memphis, Tenn. Funeral services were held at Spring Hill, with Dr. Nat Long officiating. Burial was in West View Cemetery, Atlanta.

* * *

*Dr. William Williamson Jarrell*, aged 72, prominent Thomasville physician, died at the Archbold Memorial Hospital, Thomasville, June 21, 1948. Dr. Jarrell was a native of Cartersville. He graduated from the Vanderbilt University School of Medicine, Nashville, Tenn., in 1901. He practiced medicine in Savannah before moving to Thomasville. He was a member of the Thomas County Medical Society, the Medical Association of Georgia and was a fellow of the American Medical Association. Survivors include his wife, the former Saidee Luff, Nashville, Tenn.; two daughters, Mrs. Louie Ludlow, Jr., Washington, D. C., Mrs. Glenn Segars, Swainshoro; three sons, W. W. Jarrell Jr., Washington, D. C.; John H. Jarrell, Jacksonville, Fla.; Rembert L. Jarrell, Cedartown; one brother, Dr. Charles C. Jarrell, Atlanta; two sisters, Mrs. W. J. McClenny, Meigs, and Mrs. Henry Turner, Thomasville. Private funeral services were held for Dr. Jarrell.

* * *

*Dr. Walter Scott Wilson*, aged 90, dean of Savannah's physicians and surgeons, died at his home, 303 East Taylor Street, Savannah, May 27, 1948. He was the son of the late Capt. Stephen Alfred and Tabitha Edwards Wilson. He studied under private tutors and then attended school at Poughkeepsie, N. Y. Deciding to become a doctor, he went to Johns Hopkins University School of Medicine, Baltimore, Md., and graduated with honors in 1904. He practiced medicine and surgery in Savannah for more than fifty years. He was noted in the medical profession as a great diagnostician and his papers include letters from such distinguished physicians as Sir William Osler and Dr. William Dancy, commending him for his extraordinary diagnoses. He was the oldest member of the First Baptist Church, Savannah. Dr. Wilson was one of Savannah's best educated men and one who had heen an outstanding teacher prior to reaching a decision to become a physician and surgeon. He served for more than thirty years on the Board of Education and made a record for bold and courageous handling of the county's educational facilities, and under his leadership many improvements were added to the school system. He is survived by a son, Emmet C. Wilson of Birmingham and Atlanta; three daughters, Mrs. Olaf Otto and Mrs. Wilson Noyes of Savannah, and Mrs. James B. Gregorie, wife of Colonel Gregorie, U. S. A., now serving in Germany; a brother, Dr. F. C. Wilson, and a sister, Mrs. Oscar Williams, both of Cedar Lodge. Funeral services were held at the chapel of Fox and Weeks Funeral Home. The Rev. John S. Wilder, pastor of Calvary Baptist Church, officiated.

## VETERANS' NEWS

Nearly one-third of all patients in Veterans Administration hospitals take part in sports activities, many of which have been adapted to the limitations of veterans' disabilities. During November, 1947, for example, 31 percent (31,567) of the 106,000 patients participated in some form of sport.

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Paraplegic patients in four Veterans Administration hospitals took part in a telegraphic archery tournament conducted by the Paralyzed Veterans Association of America in cooperation with VA Special Services. Participants were required to shoot either from their wheelchairs or from a prone position.

Patients in the VA hospital in Hines, Ill., won the tourney. The other hospitals represented were in Framington, Mass., Memphis, Tenn. (Kennedy), and Van Nuys, Cal.

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Sports directors in several Veterans Administration hospitals devised a water-basketball game for patients paralyzed from the waist down. All participants must obtain permission from their physicians before playing. Inner tubes or pontoon swimming trunks are worn by those who feel the need for added buoyancy. Although rules vary at each hospital, all call for a single goal located either in the center of the pool or hanging from a diving board.

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Six Veterans Administration hospitals reported that, during November, 1947, at least two-thirds of the patients took part in sports activities. The hospitals are in Huntington, W. Va., Mendota, Wis., Knoxville, Iowa, Topeka, Kansas, Gulfport, Miss., and San Juan, Puerto Rico.

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There were more than 109,000 paticnts hospitalized by the Veterans Administration on March 1.

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If limitations on hospitalization remain unchanged, Veterans Administration predicts a peak load in 1975 of 250,000 patients in its hospitals.

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Sixty-three percent more World War II veterans were admitted to Veterans Administration hospitals during 1947 than during the previous year. Admissions of other veterans jumped 32 percent in 1947 over the 1946 figure.

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## HEALTH AND REHABILITATION

*Address given by Major General R. W. Bliss, the Surgeon General, U. S. Army, at the Award Dinner for General Paul Hawley, sponsored by The National Council of Rehabilitation, 19 March 1948, at 8:00 P.M., in the Waldorf-Astoria Hotel, New York City.*

It is a privilege to participate in this program in honor of a fine gentleman and outstanding fellow medical officer. General Hawley, by virtue of his accomplishments, has rendered our country a service of inestimable value.

I shall present the incidence of disability in our manpower as revealed by Selective Service examinations during World War II.

Considering the functioning of our Federal, state, and local health organizations and the high standards of housing and nutrition throughout the country in general, we are liable to assume that we are a healthy and sturdy people. By comparison with other countries this is largely true. Despite our great efforts and the efficiency of our health agencies, both official and voluntary, the general health status of the American people is still far from ideal.

Lower income groups are contributing a sizable proportion of all children born. Often these families cannot provide the individual health protection and medical care required by these children. There are large areas of the country without organized public health facilities and still larger areas with only partial public health services. There is also considerable evidence that the nutritional status of many of our school children is inadequate for proper physical and mental development. Likewise, the great number of children who appear before Juvenile Courts each year is proof that there is still much to be accomplished by our homes and schools in the inculcation of proper attitudes and mental adaptability. With these facts in mind it is not difficult to understand the rather depressing situation that came to

light during the last war.

The Selective Service examinations were in a way a crucible in which the physical and mental fitness of our young men were tested and measured. I use the term "measured" with reservation, since the currently available data do not disclose the health status to any close degree, such as do the results of school health examinations which list all physical and mental defects. The Selective Service examination was designed to achieve principally one purpose. That was to determine which men were physically fit for the rigors of general or limited military service. Hence each individual was measured, or compared, against an arbitrary set of standards and either accepted or rejected. Present Selective Service data refer only to the rejectees, or those whose infirmities were such that they could not be effectively absorbed into the military organization in any capacity. Many of these men had more than one cause for rejection. But, since failure to meet the acceptable staudard in only one instance was required for rejection, that is all that is included in current Selective Service figures—the principal reason for nonacceptance. Likewise mauy correctable or nouincapacitating defects were present in those passed for military service. Another study is now being made to determine the total prevalence of physical and mental defects as determined by these examinations without reference to rejection. However, the results of this study are not yet available, and the data which I am about to present are but rough indices. Only the prevalence of infirmities present in the worst degree is depicted.

The Selective Service rate of rejection in World War II was alarmingly high. Prior to the cessation of hostilities, 16,000,000 men between the ages of 18 and 38 years were examined. Thirty per cent of these, or 4,828,000 were rejected for mental or physical defects. Following hostilities the standard for existing minimum literacy was raised to the equivalent of a fourth grade educational level. Then the rate of rejection increased to 37 per cent. During tlus period, about one-third of the white registrants and almost 60 per cent of the colored registrants were rejected for physical and mental reasons.

Neuropsychiatric disorders were by far the largest single cause for rejection. During the first 4½ years, there were 1,846,000 rejections for this cause at induction stations. This constituted about 12 per cent of all those examined and 38 per cent of all rejections for all causes. Psychoneurosis was the principal psychiatric cause among white registrants, while among colored registrants tlie principal psychiatric disorder was psychopathic personality. The psychoses were the least important in this group. Of course, not all those rejected were unduly handicapped for civilian life, but on the other hand, all those unsuited for military service were not weeded out. There were one million neuropsychiatric admissions to Army hospitals during the war. There were 382,000 disability discharges for neuropsychiatric reasons, representing 39 per cent of all those discharged for mental and physical defects. However, all these men received maximal benefit from Army hospitalization before discharge, and 80 per cent are now gainfully employed. In addition there were 163,000 who were discharged administratively, and not for medical reasons, because of inaptness, lack of adaptability and personality defects. These facts are a shocking indication of the state of our nation's mental health. It has been estimated that two in every 20 adult Americans will need psychiatric help and one in 20 will spend some part of his life in a mental hospital.

The second most important cause for rejections was musculo-skeletal defects. There were 935,000 of these, constituting about 6 per cent of all men examined or almost one out of every five rejectees. Within this group severe hernia made up 42 per cent of the total, and pronounced flatfoot 8 per cent. The remainder consisted of various incapacitating involvements of the bones, joints, or muscles, ranging from amputations of extremities through post-poliomyelitic paralysis to mild arthritis.

The third leading reason for incapacity was disorders of the eye, ear, nose or throat. These accounted for 30 rejections out of every thousand men examined. Eye defects, including visual defects of severe degree, constituted 51 per cent of these, and ear disorders, principally loss of hearing to a marked degree, 42 per cent.

The fourth cause of importance was cardio-vascular disease which accounted for 22 rejections out of every thousand men examined.

The incidence of rejection for other leading infirmities per each thousand men examined was syphilis 17, pulmonary tuberculosis 9, gastro-iutestiual disorders 8, genito-urinary disorders 7, and respiratory disease 9. The figure for syphilis does not refer to a homogeneous class. It includes all men found to have the disease through 1942 and not subsequently called up, and after that year only those having cerebrospinal, cardio-vascular or visceral syphilis. Syphilis would have played a greater role had the standard not been lowered.

Thus to summarize the Selective Service data, three out of every ten men between 18 and 38 years of age were found to be unfit for military service due to mental or physical reasons. The four leading causes for rejection were mental reasons, present in 12 out of every 100 examined; musculo-skeletal in 6 of each 100; eye, ear, nose or throat disorders in 3 in every 100; and cardio-vascular disease in 2 in 100.

Now consider in addition to these rejectees the one million men discharged from military service for disability. The sum is not an encouraging picture of our manpower situation today.

This problem has been taken seriously. There are under study detailed methods for the complete use of manpower in a future emergency. We must consider it from every point of view and on a National scale.

There is hope and reason to believe that a workable system can be devised whereby the physically handicapped may be useful members of both the military and civilian society. To achieve this goal it is essential that a coordinated effort be made to rehabilitate, as far as possible, this great segment of our population.

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# THE MANAGEMENT OF RESIDUAL COMMON DUCT STONES

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*Atlanta*

The indications for exploration of the common bile duct have been widened in the past 25 years. Allen, Clute, Judd and Marshall, Lahey, Walters and Zollinger have reported common duct exploration in 30 to 40 per cent of all their biliary tract surgery. At the same time these authors found choledocholithiasis in 13 to 20 per cent of all patients harboring gallstones. Crump in 1000 routine autopsies found that almost one of every four (24 per cent) persons with cholelithiasis harbored a stone in the common bile duct. Despite the use of malleable handled scoops, Bakes' dilators, the suction technic of Lahey and the irritation technic of Clute, stones are overlooked in the biliary tree.

It has been repeatedly emphasized that residual common duct stones should be suspected when pain, colic, nausea, vomiting, icterus, acholic stools, chills, fever or any combination of these occur when the catheter or T-tube draining the common duct is clamped. It is even more important to emphasize that the extrahepatic biliary tree may be packed with stones and that the patient may be entirely asymptomatic with the drainage system clamped for weeks or months.

Cholangiography should be used routinely in all patients who are submitted to choledochostomy, as this is the surest means of determining the absence of residual stones. Delayed or postoperative cholangiography is the method more commonly used. If the postoperative cholangiograms are unsatisfactory or equivocal they should be repeated until the surgeon is satisfied that no residual stones are present, that the common duct has returned to normal caliber and that the medium readily enters the duodenum. The amount of radioopaque substance used will vary from 10 to 50 cc. depending on the amount of hydrohepatosis present. It is advantageous to take an exposure immediately on completing the injection of medium and at ten-minute intervals thereafter until fluoroscopy reveals the dye entering the duodenum. Oblique as well as anteroposterior views are helpful in visualizing the common duct, especially the retroduodenal portion. Hippuran or diodrast are to be preferred to the heavier media. At times the dye may enter the duodenum so rapidly that the common duct is not well visualized. If this occurs, cholangiography should be repeated 30 minutes after the administration of morphine or some other drug which is spasmogenic for the sphincter of Oddi.

Many nonoperative means have been used to remove residual common duct stones. Ethyl ether is the most popular substance used in an effort to dissolve residual common duct stone; it is injected via the common duct drain. It was first successfully used by Walker in 1891. Subsequently Burgess, Morton, Pibram, Raffl, Walters and Welborn, among others, reported the successful fragmentation and passage of

Read before the Medical Association of Georgia, Atlanta, April 28, 1948.



Figure 1

Patient W. T. Patient operated on elsewhere. Postoperative cholangiogram showed obstruction to flow of dye and radioopaque stone in common duct. T-tube clamped for weeks without symptoms. T-tube irrigated with ethyl ether, nupercaine solution 1:500, and saline; biliary flush of Best and Hicken used repeatedly without change.



Figure 2

Patient W. T. Cholangiogram two weeks after secondary exploration of common bile duct and removal of one stone. No stone seen. Note free flow of dye into duodenum and normal caliber of common duct. T-tube removed. Sinus healed in 24 hours.



Figure 3

Patient A. H. Patient operated on elsewhere. Postoperative cholangiogram showed dilated common bile duct containing many radiolucent stones. Note rounded shadow of dye-filled duodenum. T-tube irrigated with ethyl ether, nupercaine solution 1:500 and saline without change.

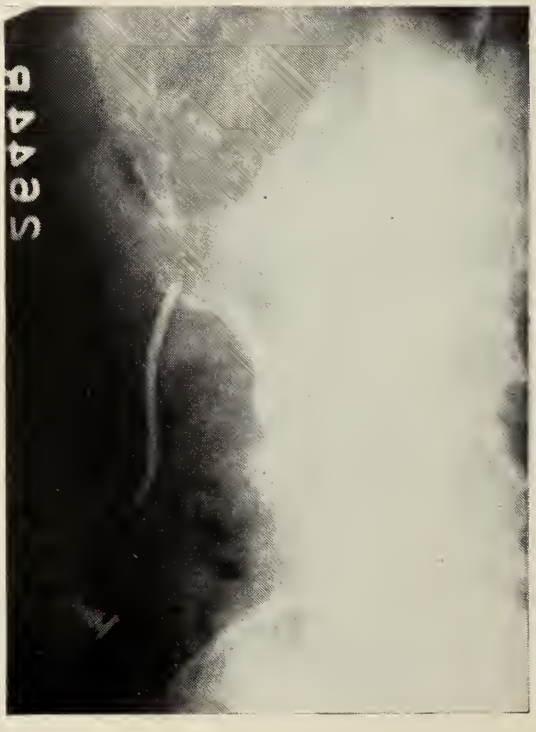


Figure 4

Patient A. H. Cholangiogram one month after secondary exploration of common bile duct and removal of 47 stones. No stone seen. Note return of common duct to normal caliber and free flow of dye into duodenum. T-tube removed. Sinus healed in 24 hours.



Figure 5

Patient C. L. Patient operated on elsewhere. Postoperative cholangiogram showed multiple radiolucent stones in dilated common bile duct with free flow of dye into duodenum. T-tube clamped for months without symptoms. T-tube irrigated with ethyl ether, nupercaine solution 1:500 and saline without change.

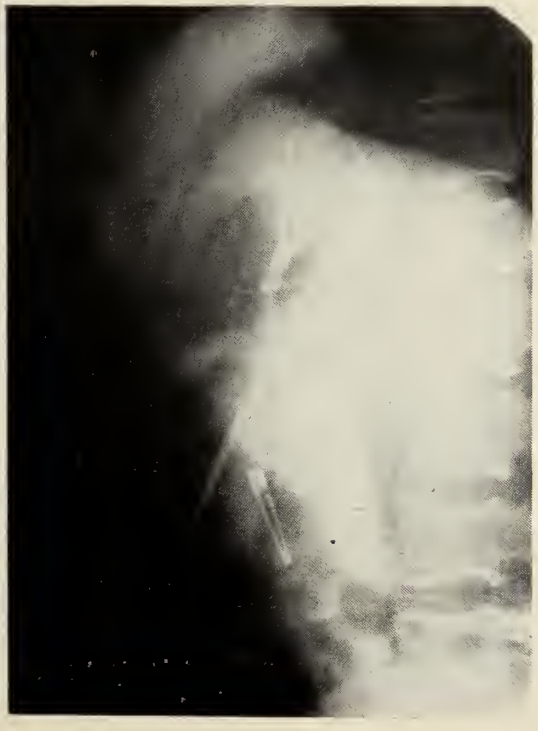


Figure 6

Patient C. L. Cholangiogram two weeks after secondary exploration of common bile duct and removal of seven stones. Cholangiogram unsatisfactory; dye entered duodenum so rapidly that it obscured region of common duct.



Figure 7

Patient C. L. Cholangiogram repeated 30 minutes after administration of 1/6 grain morphine sulfate subcutaneously to cause spasm of common duct sphincters. No stones seen. There was still free flow of dye into duodenum. Common duct has returned to normal caliber. T-tube removed and sinus healed in 48 hours.

residual common duct stone following the use of ethyl ether. Pibram had success with ether in each of 38 patients with residual common duct stone. At operation he introduced a urethral catheter through a choledochotomy down to the region of the ampulla of Vater. If cholangiography revealed stone he introduced a few drops to one cubic centimeter of ether via the catheter followed by lavage with saline to relieve pressure; following this the catheter was clamped. The treatment was repeated three times a day until the stone passed; at times treatment was continued for as long as eight weeks. To quote Pigram, "Now that the ether method is available for postoperative removal of stones there is no longer the same urgent need to make sure during the operation that no stone has been left." It is important not to clamp the drainage tube after injection of ether, for, as Raffl has pointed out, one cubic centimeter of ether at body temperature and standard atmos-

pheric pressure vaporizes at 222.1 cubic centimeters of gaseous ether. Burgess, and Probstein and Eckert pointed out that ether was successful only in pure cholesterol stones or mixed stones bound by cholesterol and that a surrounding layer of inflammatory calcium prevented ether from reaching the soluble cholesterol. The latter workers injected ether into the common bile duct of dogs and found that it was followed by pain, decreased bile output, anorexia and jaundice. Examination of sacrificed animals revealed progressive destruction of the mucosa of the gallbladder and common bile duct. I have injected ether in small amounts (less than 5 cc.) through the T-tube of several patients in an effort to dissolve residual stone, and have been successful in only one case. The procedure is so painful that opiates are often required with their attendant spasm of the sphincter of Oddi. Most patients, after a few injections, prefer secondary surgical removal of the stone.

Goldman, Jackman and Eastman advocate irrigation of the common duct via T-tube with solution G as a slow drip, giving 1000 to 2000 cc. per day.

Harris and Marcus succeeded in passing residual stone by the injection of 10 cubic centimeters of a 1:500 solution of nupercaine through the T-tube, which is then clamped. The local anesthetic abolishes the afferent impulses initiated by the residual stone; the reflex arc is broken and the sphincters of Boyden and Oddi relax allowing the stone to pass.

Best and Hicken use antispasmodics, magnesium sulfate and olive oil by mouth, and T-tube irrigation with saline followed by instillation of olive oil into the T-tube in conjunction with large doses of bile salts orally. The antispasmodics, as well as the magnesium sulfate and olive oil, relax the sphincters of Boyden and Oddi while the irrigations and the bile salts increase the common duct pressure, flushing out the stones. One of the antispasmodics advocated, atropine sulfate, has been found by Butsch, McGowan and Walters and by Necheles, Olson, Neuwelt and Spier to be ineffective on the common duct sphincters. The increased common duct pressure resulting from the administration of bile salts may cause further hydrohepatosis and liver damage if any of the retained stones block egress of bile. The prolonged use of this regimen when multiple stones are present is dangerous. In my hands this regimen has been ineffective.

In many patients any or all of the nonoperative methods fail and secondary exploration of the common bile duct and mechanical removal of stone are necessary. If the catheter or T-tube is left in place there is no emergency about the secondary operation and the patient should be prepared with fluids, blood, vitamins and a high carbohydrate diet before surgical intervention. The tube also facilitates identification of the common bile duct at the time of operation, making it a speedier and safer procedure.

*Summary*

1. As more common bile duct explorations are undertaken more choledocholithiasis is revealed, but there is an inevitable higher incidence of residual common duct stone.
2. Postoperative cholangiography should be used routinely before removal of the common duct drain, as, lack of symptoms with the drainage system clamped, is an unreliable method of ascertaining the presence or absence of residual stone.
3. If residual common duct stones are found on cholangiography, the more conservative nonsurgical methods of re-

moval should be tried. Irrigation of the common duct drain with solution G, the instillation of 1:500 nupercaine solution and perhaps Best and Hickens' regimen may be tried. Irrigation with ethyl ether is painful, dangerous and usually unsuccessful.

4. If non-surgical measures fail to remove the stone, secondary choledochotomy and mechanical removal are necessary.

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The Medical Association of Georgia centennial session will be held at the Hotel DeSoto, Savannah, May 10-13, 1949. Make your hotel reservations now.

# SURGERY OF THE THYROID

## *Review of Cases*


C. H. Richardson, M.D.
C. H. Richardson, Jr., M.D.
*Macon*


### *Introduction*

The object of this paper is to present a series of 82 consecutive thyroidectomies performed by us during the past 2½ years. There was no selection, and all cases completed are included. During this period attempt has been made to treat each individual case on its own merits and later to analyze the data and compare our findings with those of others. This has been most instructive to us, and in recording the results we will discuss briefly some of the questions that have come up.

### *The Question of Toxicity*

In classifying goiters the standard usage of diffuse and nodular, toxic and non-toxic has been followed. Often we have found that this is an over-simplification and that individual cases are hard to place, especially the nodular goiters. However, classification on a physiologic and pathologic basis is important as therapy is based on it.

TABLE 1

| *Number of Cases* | 82 | *Toxic* | 39 | *Non-Toxic* | 43 |
|---|---|---|---|---|---|
| Females | 71 | | 30 | | 41 |
| Males | 11 | | 9 | | 2 |
| White | 63 | | 25 | | 38 |
| Colored | 19 | | 14 | | 5 |

In table 1 we have broken our cases down as regards sex, race and toxicity. From these figures the predominance of goiter in the female is noted, whereas the disease is relatively more toxic in the male, and also in the colored race. We have tried very hard to determine toxicity. This cannot be done by any single finding, but by a combination of history, physical findings and elevation of the basal metabolic rate. When

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nervousness, weight loss, tachycardia, enlarged thyroid, and increased metabolic rate are all present in the absence of other disease, a diagnosis of toxic goiter is made. We have found a great discrepancy in B.M.R. reports from various sources, and careful personal control of this procedure has been a great aid in evaluation.

TABLE 2
NUMBER OF CASES 82

| | | | |
|---|---|---|---|
| *Toxic* | 39 | *Non-Toxic* | 43 |
| a. Diffuse | 24 | a. Diffuse | 1 |
| b. Nodular | 15 | b. Nodular | 42 |

These cases are further broken down in table 2 to show the relation of toxicity to the physical characteristics of the gland. The diffuse enlargement is more often toxic while the nodular is less often so. In fact, the nodular goiters are hardest to classify, as they show wide variation in the clinical picture, and we feel it is an open question as to whether the so-called non-toxic nodular goiter does not go through mild cycles of toxicity.

TABLE 3

| | *Average Age* | *Initial B.M.R.* |
|---|---|---|
| *Toxic* | | |
| a. Diffuse | 38 | +45 |
| b. Nodular | 45 | +31 |
| *Non-Toxic* | | |
| a. Diffuse (1 case) | 21 | − 8 |
| b. Nodular | 41 | + 1 |

In table 3 is shown the average ages and average metabolic rates of the various groups of cases. These lend support to the concept, not original with us, that the diffuse toxic is an acute form of goiter and the nodular toxic a more chronic form. Possibly the first results from a continued and strong stimulation of the gland by the pituitary, where the second represents an intermittent over-stimulation.

### *Indications for Surgery*

Now we wish to state briefly the indications for surgery in each group:

1. In the diffuse toxic goiter the indications are most positive and our experience is that to date adequate surgery is by far the most effective method of treatment, and we feel that here treatment of the goiter takes precedence over all else. This goiter is most often associated with exophthalmos and other eye signs. These occurred in 12 of our 24 cases of diffuse toxic goiter. In several it was progressing rapidly. In all of the 12 the exophthalmos was arrested or improved following operation, although in none of them did it completely go away.

2. The nodular toxic goiter is slower to develop and sometimes presents the picture of masked hyperthyroidism. Heart failure may be the earliest symptom, and the thyrotoxicosis overlooked. Here the effects of careful surgery are most gratifying.

3. The diffuse non-toxic is usually the adolescent goiter and rarely is surgery advised. Proper treatment with iodine will often cure it. In our locality we do not see many colloid goiters which are the adult form. In these surgery is indicated for cosmetic reasons or because of pressure. Our one case was a white girl of 21 who was nervous because of the lump in her throat. She had a moderate diffuse enlargement and a B.M.R. of −8 and we removed it because of cosmetic reasons.

4. There is no doubt but that some nodular goiters are non-toxic, or at least quiescent. However, beside the possibility of their becoming toxic there are at least two other good reasons for removing them. One is that they cause pressure, especially when they extend substernally, and another is that they may show malignant change, as will be brought out later. We think that the solitary non-toxic nodules are the most dangerous from this aspect, and we urge that they be removed.

TABLE 4

| *Pre-Operative Treatment* | *Lugol's Alone* | *Thiouracil* |
|---|---|---|
| Toxic-Diffuse | 24 | 6 | 18 |
| Toxic-Nodular | 15 | 13 | 2 |
| Totals | 39 | 19 | 20 |

### *Preparation for Surgery*

In table 4 the preparation of our toxic patients is shown. By adequate preparation

the operation is made safe, and since the addition of the thiouracil drugs hyperthyroidism can be completely controlled and a thorough and adequate operation performed without danger.[1] Early in this series we did the only pole ligation on a toxic diffuse goiter in a colored male. At that time we were beginning to use thiouracil but did not appreciate its real worth. Now we are sure a pole ligation could have been avoided by longer and more thorough use of one of the anti-thyroid drugs.

It will be seen in this table that we have employed thiouracil or propyl-thiouracil more often in the diffuse toxic goiters and here it is a great help. In the milder cases, and most cases of nodular toxic goiter, the combination of rest, high calorie diet, sedatives and Lugol's is quite effective. We are now using Lugol's solution from the start along with propyl-thiouracil to prepare our more toxic patients, and we wait until the pulse comes down, the patient is gaining weight and the B.M.R. is approaching normal, regardless of how long it takes.

*The Operative Technic*

In considering the operative technic, anesthesia is very important. We have been through the days of local infiltration, a combination of local and pentothal or gas, and more recently cyclopropane and endotracheal anesthesia. All of these technics represent advances. Now, with more adequate preparation the dangers of general anesthesia are greatly diminished and the drawbacks of local anesthesia can be avoided. Certainly in the more difficult cases endotracheal anesthesia is a great help, and we are using it more all the time.[1] We have followed the standard technics of operation of sub-total removal of the gland, cutting the strap muscles if necessary. However, as we have gone along the need for removing nearly all the gland has become more and more obvious, particularly in the toxic diffuse cases. For this reason we have attempted more and more the exposure of the recurrent laryngeal nerves and ligation of the inferior thyroid arteries as described and advocated by Dr. Frank Lahey. We are convinced that this technic is a real advance and adds to the safety and effectiveness of thyroidectomy.[2]

TABLE 5

| | *No. Cases* |
|---|---|
| Non-Toxic Nodular Group | 42 |
| Chronic Lymphoid Thyroiditis (Hashimoto's Disease) | 3 |
| Chronic Sclerosing Thyroiditis | 1 |
| Simple Adenomatous Change | 30 |
| Fetal Adenoma | 4 |
| Papillary Cystadenoma | 1 |
| Hurthle Cell Tumor | 1 |
| Adenocarcinoma | 2 |

In table 5 are seen the findings in our group of non-toxic nodular goiters. Pathologically, this is the most interesting group, and because we have been misled so often we insist on a microscopic examination of every specimen. Chronic lymphoid thyroiditis is a diffuse hard swelling accompanied by infiltration with lymphocytes. Its etiology is obscure. It may be accompanied by myxedema and grossly it can simulate carcinoma. Our case of chronic sclerosing thyroiditis may have been a mild form of Reidels' struma or woody thyroiditis. Simple adenomatous change here means nodular areas of hyperinvolution.[3]

Fetal adenoma is a benign neoplasm. However, many authors have stated that it is a precancerous lesion.[4] The last three categories are malignant or potentially malignant. All were discovered incidentally in cases referred for operation because of what appeared to be an adenomatous goiter. No attempt can be made here to discuss in detail the subject of cancer of the thyroid. However, it should be mentioned that wide variations in malignancy exist and the treatment and prognosis must be based on a sound knowledge of cancer in this locality.[5] The outlook is far from hopeless even in some apparently far advanced cases, and

in general the most successful therapy has been a combination of radical surgery and radiation. One of our cases was found within an adenomatous lobe in a woman of 56. The lobe was completely removed and she received x-ray therapy. She has passed two years without recurrence. Our other case was done recently in a woman of 49. Her thyroidectomy was followed also in a few days by heavy x-ray therapy.

TABLE 6
COMPLICATIONS

| *Total Number Treated* | 82 | *Case Group* |
|---|---|---|
| Nerve Injury Severe | 1 | Toxic Diffuse |
| Mild Temporary Hoarseness | 7 | 6 Toxic Diffuse<br>1 Nodular Non-Toxic |
| Hemorrhage | 1 | Toxic Diffuse |
| Postoperative Tetany | 3 | Toxic Diffuse |
| Postoperative Psychosis (Suicide) | 1 | Toxic Diffuse |
| Wound Infection | | |
| a. Mild | 1 | Toxic Diffuse |
| b. Severe | 0 | |
| Postoperative Hypothyroidism | 6 | 4 Toxic Diffuse<br>2 Nodular |

### *Complications*

As is easily seen in table 6 the complications were higher in the toxic diffuse group. These patients were sicker, their glands more vascular and the need for more complete removal greater. However, there were no cases of "thyroid storm" nor were there any cases of phlebitis or serious pulmonary complications. The one death in the series was a white male aged 52 who had a small diffuse goiter with marked toxicity. He was prepared with propyl-thiouracil and Lugol's solution and a sub-total thyroidectomy done. He did well until the third day when he developed mild hallucinations, the seriousness of which was not appreciated until that night when he suddenly leaped to his death through the hospital window. Our one severe case of nerve injury was also the case of postoperative hemorrhage. This was a white male aged 54 with a toxic diffuse goiter. Most of the gland was removed with rather free bleeding. He continued to bleed postoperatively and that night his wound was reopened under anesthesia. The bleeding was from both inferior thyroid arteries, and two days after the second operation he developed laryngeal obstruction and a tracheotomy was necessary. After five weeks one vocal cord moved well and the tracheotomy was discontinued; now the other cord moves also but mild hoarseness persists. We have had no incidence of nerve injury in cases where the nerves were demonstrated as part of the operative technic. Three of our cases developed temporary postoperative tetany with typical carpal spasm and nerve irritability. All responded to calcium by vein and parathyroid hormone, and all cleared up in a few weeks after receiving calcium and vitamin D therapy.

The question of postoperative hypothyroidism comes up but it is relatively uncommon and easy to control with dessicated thyroid. Usually the patients have not had to take this medication long, but are able to adjust so that after a few months it is not needed. In two cases of diffuse toxic goiter, myxedema developed postoperatively and fluid appeared in the knee joints. No other cause for this could be found and there was gradual improvement when thyroid extract was given. We must conclude that contrary to the teachings of Hertzler, an adult does need some thyroid tissue but very little is sufficient.[6]

TABLE 7

| | | |
|---|---|---|
| *Thyroidectomies* | | 82 |
| Recurrences Treated in This Series | | 8 |
| a. Toxic Diffuse | 5 | |
| b. Toxic Nodular | 2 | |
| c. Non-Toxic Nodular | 1 | |
| Recurred of This Series | | 2 |
| a. Toxic Diffuse | 2 | |

### *Recurrences*

Eight of the 82 cases shown in table 7 represented recurrences. Two of these were previously operated on in the same series, while six had been operated on by others. The majority of these were in the toxic diffuse group, and the best answer we have today for these is more thorough operation the first time. This will occasionally lead to hypothyroidism but this is relatively easy

to handle, whereas recurrent hyperthyroidism is admittedly difficult.

TABLE 8

| | | | | | |
|---|---|---|---|---|---|
| *Cases Treated* | 82 | *Toxic* | 39 | *Non-Toxic* | 43 |
| Recurred | 2 | | 2 | | 0 |
| Symptoms Persist (Nervousness) | 5 | | 2 | | 3 |
| Died | 1 | | 1 | | 0 |
| Apparently Well Now | 76 | | 36 | | 40 |

### *Results*

Table 8 shows the followup results: Two recurred, were reoperated on and are now well. Two of the toxic and three of the nontoxic groups complain of nervousness and instability but are not toxic as far as we can tell. There was one death due to postoperative psychosis and suicide. Seventy six are apparently well and carrying on normal activities.

In summary, a plea has been made here for careful evaluation of each case of goiter. The surgical indications for the various types of goiter have been stressed and some of the complications and pathologic findings of goiter surgery have been discussed, more particularly as follows:

1. We have presented the results of 82 consecutive cases of thyroid disease for whom surgery was done.

2. Eighty-seven per cent were females, and 13 per cent were males; 77 per cent were white and 23 per cent were colored. There were fewer cases in males and in negroes. but in both groups there was a higher incidence of toxicity.

3. The diffuse toxic goiter is more rapidly toxic than the nodular. It occurs as a rule in younger people, the metabolic rates are higher, the progress is more rapid, and it requires early operation. The nodular type is more chronic and has remissions.

4. We have given as indications for surgery cosmetic reasons and pressure symptoms in the colloid types. Surgery is always definitely indicated in the diffuse toxic types. and soon. The nodular goiter is slow to develop, but we feel that it is best to remove it before it becomes toxic, and to eliminate the risk of future malignancy or cardiac degeneration.

The toxic nodular goiter should be removed, but it can wait the period of election. The solitary nodule should always be removed on account of the high incidence of later malignancy —5 to 20 per cent.

5. We feel that drugs have only a place in the preparation of the patient for surgery. The thiouracil group is of definite value in this field and it is our impression that thiouracil is more effective than propylthiouracil, but also more toxic.

6. We feel that a definite contribution to the operative technic of thyroid surgery has been the identification of the recurrent laryngeal nerves, and the ligation of both the superior and inferior thyroid arteries.

7. We feel that with proper preparation, proper operative technic and postoperative care, most complications are avoidable. This we feel applies also to recurrences.

8. We realize that we are operating upon the end results of hyperthyroidism and goiter rather than a direct attack upon the cause of the disease. Some day, probably, we will make this direct attack but until that time comes along surgery seems to offer the best outlook for cure of this disease.

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The Post-Graduate Committee of the Medical Association of Georgia plans to hold two seminars during the year, one at Emory and one at Georgia. Note next month's JOURNAL for details regarding dates, subjects, etc., a program designed particularly for the general practitioner.

# EARLY AMBULATION IN MAJOR ABDOMINAL SURGERY

IRVING L. GREENBERG, M.D.
*Atlanta*

"Bed rest is too frequently ordered as part of a therapeutic plan without consideration of real necessity or consequences. Blood clots in the veins, lime drains from the bones, scybala stack in the colon, flesh rots from the seat, urine leaks from the distended bladder, and the spirit evaporates from the soul of a patient who lies too long in bed. No part of the body escapes the deleterious effects of prolonged rest."

Thus wrote Dr. R. A. J. Asher in his article: "The Dangers of Going to Bed."

While all these effects are rarely experienced by a single patient, it is becoming recognized by surgeons to a greater degree every day that not only will patients on whom major surgery has been performed have fewer respiratory, vascular, gastrointestinal, urinary and psychologic complications if they are ambulated early; but, on the positive side, they will be hospitalized for briefer intervals, have fewer tubes in their stomachs (and for shorter periods), have almost no catheterizations, intravenous feedings will be greatly diminished, and they will go home with a greatly reduced hospital bill.



Figure 1

Mr. D., aged 39, had a large incarcerated left inguinal hernia. Operation: herniorrhapy, which included resection of large amount of hypertrophied omentum. Cut on right shows the patient 24 hours after operation, at fourth out-of-bed period.

Read before the Medical Association of Georgia, Atlanta, April 28, 1948.



Figure 2

Mrs. S., aged 52. X-ray examination showed mass compressing under surface of cecum. Two needles could be seen laterally, probably the cause for the inflammatory mass.



Figure 3

Mrs. S., 24-hours after ileotransverse colostomy.

Because I want to show as many slides as possible in the time allotted I shall not delve into the physiologic and physiopatho-



Figure 4
Miss C., aged 63. X-ray studies showed large filling defect in the stomach, caused by a large prepyloric carcinoma with large ulcer. Note other cuts, which show Miss C 24- hours after she had a subtotal gastrectomy, 48-hours after the operation, and at the eighth postoperative day.



Figure 5
Mr. De B.: Acute cholecystitis with cholelithiasis. Operation: Cholecystectomy and appendectomy. Photograph was made third postoperative day. Patient was discharged from hospital at fifth postoperative day. Cut on right shows patient at office at seventh postoperative day.

logic reasons for the statements just made, but for those who are interested in this phase there are available many recent papers on the subject[1 2 3]. I would particularly recommend Leithauser's excellent book entitled, "Early Ambulation".

I shall limit this discussion to the questions most frequently asked by physicians, nurses and patients alike, and to the showing of a set of photographs representing a wide variety of abdominal procedures.

Just a word about incisions: Transverse incisions should be used wherever possible. The most common site of incisional hernia is in the upper abdominal vertical incision. In closing wounds of this type sutures are placed parallel to the direction of the transversalis muscle and fascia and, therefore, tend to pull through during muscle contraction. Conversely, in closing a transverse incision the sutures are placed perpendicular to the direction of the fibers and hold much better. Besides, contraction of the muscles tends to pull such a wound closer together. Non-absorbable suture material should be used and is more reliable than catgut.

### *Contraindications*

Our contraindications to early postoperative walking are few indeed. Rarely is a patient allowed to remain in bed after surgery for more than a few hours without being ambulated and there must be present a definite contraindication. Deep shock, uncontrolled hemorrhage, severe anemia, the presence of thrombi or emboli, prolonged preoperative confinement and when death is imminent or a hopeless condition exists—these may be considered as contraindications.

### *Advantages*

Some of the advantages of early ambula-

tion are as follows: Asthenia is avoided; morale of the patient is greatly lifted; it is economical to the patient and the hospital; simplification of postoperative care; surgery is rendered less hazardous—especially in the aged; complications are markedly reduced, and there is more rapid wound healing with consequent earlier return of the patient to normalcy.


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## DISCUSSION

Note: The following discussions not only include the foregoing papers, but also the papers of Drs. Thomas N. Freeman, Charles W. Hock, Arthur G. Singer and John S. Atwater, which were published in the July 1948 number of THE JOURNAL.

DR. McCLAREN JOHNSON (Atlanta): With your indulgence I would like to touch on several of these papers, although it is our privilege to discuss them all. If I wished to do so, I'd feel like a little boy at a three-ring circus trying to watch everything.

I was particularly interested in Dr. Singer's paper. I have had no experience with pyloric obstructions in the newborn, but I have been plagued with a great many in adult cases. He states that most of his cases seemed to come in the seventh decade. I can't quote figures, but I believe that I have had as many in the early middle age group as in that decade.

As he says, these cases are organic and not reversible; that is, the ones he stressed in his paper. To me, the finding of pyloric obstruction puts the patient in a surgical category as far as his prognosis is concerned. I don't mean that most of these will have to be operated on but I do mean that when I find one I put him in the surgical group and my job is to get him out if I can.

I think that the erroneous diagnosis that Dr. Singer mentioned in connection with the gallbladder disease which was apparent because the dye did not leave the stomach points to a moral: that in most cases everything should be studied. I don't think we could have a better illustration than that.

In considering the treatment of pyloric obstruction, whatever the cause, it is well to emphasize the fact that parenteral medication is the first choice. For that same reason medicines given by mouth often do little or no good. It is debatable how much absorption takes place in the stomach, but if we give vitamins by hypo we know the patient gets exactly the dose we administer. I don't know what Dr. Singer's experience has been in this connection. I would like for him to comment on it.

He speaks of barium retention after 24 hours. I recall only one case, where there was gastric retention after 24 hours, that did not come to surgery. I have had several others, but they have not been under observation long enough to say whether they will escape.

I think he covered every possible cause except the possibility of polyps, and a recent interesting experience I had with a migrating lipoma. I don't know whether those have ever caused obstruction, but I assume they could.

Dr. Hock's paper stresses the misuse of the word "colitis". He stressed something we are all guilty of, probably because patients recognize that word. I have tried conscientiously to use the words "irritable colon" or "spastic colon" in order not to use that word.

I want to take issue with one thing—the term suggested by Palmer of "Functional Bowel Distress." I think the use of "Functional Bowel Distress" has some danger. There are too many of the recent graduates who tend to use that expression as a catch-all. I hope I say that without giving offense, but I had it forcibly impressed on me recently when a case of "Functional Bowel Disease", as it was called, was clarified by the appearance of an appendiceal abscess. I hope you get the significance of what I have just said. If you can diagnose a rupturing appendix as "Functional Bowel Disease", the use of that expression is not without danger. I had one case where hypermotility was explained by the discovery of allergy, and responded quickly to allergic treatment.

I have had the privilege of reading Dr. Atwater's paper, and I am sorry he couldn't present it all. I like the way he marshalled his facts and did not attempt to ram his conclusions down our throats, but let us draw our own conclusions, and I think he has presented a pretty good case for the thesis he has in mind.

I enjoyed the other papers, but I don't think I am qualified to discuss them.

DR. WILLIAM R. DANCY (Savannah): Dr. William Osler very often said to us in class, "If we knew syphilis, its treatment, its complications and its diagnosis, we would know medicine." If I knew enough to discuss all these wonderful papers today, I should feel that I knew something about medicine.

I will first mention in this little resume Dr. Singer's paper, which was most practical and comprehensive. I have no criticism to make. He emphatically brings out the point that we should have a careful diagnosis by a capable diagnostician when the right upper quadrant of the abdomen is to be considered, and this should be backed up by suitable x-ray work, not only to find out whether there is an obstruction or not but to locate the specific cause which might in the future produce obstruction; that is, the nature or cause. Acute ulcers of the stomach or duodenum may cause, by irritation, if located close to the pylorus, partial obstruction. This is only temporary and if the lesion is treated the obstruction will probably subside. If the ulcers are chronic, and they may be chronic, those ulcers, will produce cicatrixes which will, in the course of time, cause blocking and contraction of the pylorus, which means that they come within the surgical regimen and demand operative interference.

It is quite important that the Kahn test or the Wassermann test be made because there are cases in which there have been pyloric obstructions due to gummata, more particularly rather than ulcer.

Although ulcers occur chiefly in the ages of 20 to 40, an ulcer has no respect for age. It may occur at any time, and if it does occur in the later ages of life a differential diagnosis is important to avoid malignancy.

The symptoms of nausea, vomiting, pain and other points which were brought out relative to the symptoms of obstruction come with many other conditions and I would call attention more particularly to the fact that we so often have these same symptoms in ptosis of the stomach which comes from relaxed musculature and we should in that instance make a differential diagnosis so that we would not mistake the case as one of pyloric obstruction.

Relative to the paper of Drs. Richardson, which is a most excellent paper, I have but little time to discuss it, but it is quite evident to the medical men that in the later stages of these thyroid cases that those cases

should be treated by surgery where medical treatment fails, where there are pressure symptoms, where there is any evidence of cancer and where there are nodular masses in adenomatous goiter which are persistent and do not yield to medical treatment. It requires a good surgeon to do this work because of the danger of nerve damage, injury to parathyroid glands, and the removal of too much or too little of the thyroid gland. I would like to ask Drs. Richardson to outline in more detail how they come to a conclusion as to how much of the thyroid gland should be removed in hyperthyroid cases. We not only have large glands and small, but toxicity that is not in proportion to the size of the gland. It would seem that the metabolic index, wise judgment of the surgeon and toxic symptoms are the main indications whereby the proper portion of the gland is to be determined.

DR. T. C. DAVISON (Atlanta): I would like to discuss all of these fine papers; they are excellent, but of course time prevents. I would like to say in regard to Dr. Greenberg's paper on early ambulation, we believe in early ambulation and practice it; it works. In regard to Dr. Atwater's paper on polyps, I think they are too often overlooked, and there are too few examinations made of the rectum both digitally and proctoscopic. I am sure that if the x-ray films of the colon were studied more carefully and more examinations made of the sigmoid and rectum, that a great many more polyps would be found, and we must remember that polyps are pre-malignant and are at times malignant, and they should always be removed.

Dr. Richardson's paper on goiter is an excellent one, and I am very glad that he has presented it here. I think the profession as a whole is not well informed on the modern treatment of goiter. The treatment of goiter has progressed more rapidly in recent years than that of most diseases.

I think thiouracil is a very dangerous drug and we now confine our treatment of toxic goiter to the use of propyl-thiouracil which is somewhat slower in action and requires larger doses than thiouracil but it is safer for the patient. We put our toxic goiter patients on propyl-thiouracil 50 mg. four times daily for several weeks, depending upon the degree of toxicity. The basal metabolic rate in cases treated thusly drops about an average of one point daily, therefore you can see that it would require a longer time to treat a patient with a basal metabolic rate of plus 90 than if it was plus 40. We do not believe in operating on these patients while they are toxic; it is safer to wait until the metabolism rate has reached approximately normal, when we put them on Lugol's solution three times daily for two weeks which hardens the gland, and reduces the amount of bleeding at operation. All of this makes the patient a safer surgical risk and makes the operation easier on the surgeon.

The question has arisen here this morning as to how much thyroid gland to remove. There is only one answer: in a toxic goiter remove all of the diseased tissue. No one would operate on an adenomatous goiter and leave one adenoma, and it is far more important in operating upon a toxic diffuse goiter to remove all of the diseased tissue, even if it requires a total thyroidectomy. If you leave 1 per cent, or 10 per cent of the diseased gland, you leave the patient just that per cent toxic, and we have too many recurrences of thyrotoxicosis due to incomplete operations. I have done many total thyroidectomies and rarely do I have a case of myxedema, and we have all seen cases of myxedema which have not been operated upon. I find it far better to give postoperative cases, should they need it, a small dose of thyroid extract daily than to have them constantly fighting thyrotoxicosis. The end-results following total thyroidectomy for thyrotoxicosis are the most spectacular in surgery, and I often have the patient say to me "For the first time in my life I am calm inside."

In closing, I would like to recite an instance of an operation on a doctor's wife from Mobile, Alabama. I had performed a subtotal thyroidectomy which was customary at that time, and she returned in a short time with a recurrence of toxic symptoms. I said, "I am sorry we did not take out enough gland. You should have had and now must have a total thyroidectomy." Of course she stated that she did not desire another operation, and she went to an internist who thought that the condition could be handled medically. In a year's time she came back and stated that she was ready for the total thyroidectomy. When it was over she felt like a different woman, and expressed her feeling by stating how calm she felt. Her husband, in expressing his appreciation said, "Dr. Davison, you think you know something about goiter patients, but wait until you have lived with one for seven years."

DR. J. C. PATTERSON (Cuthbert): Dr. Singer's paper is most interesting, especially so since it is drawn from his personal experiences rather than from a textbook. He says that pyloric obstructions are encountered in the early and the latter decades of life. Of course, this is true but not infrequently we find them in young adults also. I recall to mind two cases in young adults of almost complete obstruction of the pylorus due to duodenal ulcers with a high acidity. One of these was a young man who had had an ulcer since he was 11 years old. He had practically a complete obstruction of the pylorus at 17. Because of his weakened condition a simple posterior gastroenterostomy was done. At the operation there was found a large duodenal ulcer that had eroded through the gut wall, the liver forming one wall of the ulcer. Following the gastroenterostomy he did fine for two years; then he developed a gastrocolic fistula which to my mind is one of the worst conditions one can encounter in the abdomen. He had lost weight down to 80 pounds and it was necessary to resect his stomach, repair the colon and repair the jejunum.

Another similar case was one in whom the young man had a gastroenterostomy for pyloric obstruction at the age of 24 and two years later developed a gastrocolic fistula. This was taken down and the continuity of the gastro-intestinal tract was restored and the fistula repaired. About one year later he developed the second gastrocolic fistula. This time we resected his stomach and repaired the colon, and he has had no trouble since then.

I call attention to these cases to illustrate the danger of doing a gastroenterostomy in young adults with high acidity. I believe that it is a dangerous operation in such cases. In old people with pyloric obstruction, however, it frequently is an excellent operation.

I believe that Dr. Singer in his enumeration of the symptoms of hypertrophic pyloric stenosis in children failed to mention a tumor mass. This is very important in the diagnosis.

Dr. Freeman's discussion of preparation for gallbladder operations was excellent, and so was Dr. Hock's discussion of functional disturbances of the large bowel.

Dr. Atwater's demonstration of the origin and life history of polyps was extremely illuminating and interesting. There has recently been a great deal of attention called to the familial aspects of polyps. There have been several instances reported of three and four members of the same family having polyps and of other members of the same families who did not have polyps developing malignancies elsewhere in their bodies and earlier than malignancies usually develop, showing that there is a definite kinship between polyps and malignancies and the familial nature of polyps.

Dr. Shepard's delivery and knowledge of his subject was marvelous. In a few instances I have tried the ether irrigations to dissolve the common duct stones, but with no success. It was interesting to hear him discuss the various procedures in treating the common duct stones. He has certainly mastered the subject.

I think that most of us agree on early ambulation, and Dr. Greenberg's illustrated talk was most interesting.

One hears of so many errors in regards to thyroid surgery that I should like to read the paragraph from the 1947 *Year Book of Surgery* entitled: "Some Vulgar

Errors in Regard to Goiter". It follows.

"During the past generation the importance of goiter as a source of many unsuspected ills has been increasingly recognized, but it is natural that new advances in any field of medicine should only gradually become known to the profession at large. Therefore, J. W. Linnell, Geoffrey Keynes and J. E. Piercy warn against the following errors. (1) Though goiters which are patently toxic need treatment, most others are harmless, will probably remain so and may safely be left untreated. (2) To diagnose toxic goiter it is necessary to find tachycardia. (3) Loss of weight is a constant feature. (4) No goiter should be considered toxic unless the basal metabolic rate is above normal. (5) Iodine cures toxic goiter. (6) Treatment by deep x-ray is a satisfactory alternative to surgery. (7) The advent of thiouracil has removed the need for operation save to relieve pressure symptoms or for cosmetic reason. (8) Patients with auricular fibrillation and gross signs of congestive failure are too ill for operation. (9) Results of subtotal thyroidectomy in toxic goiter are usually satisfactory. (10) Subtotal thyroidectomy in goiter, and especially in toxic goiter, is so dangerous that it should be advised only as a last resort. (11) Thyroid surgery requires no apprenticeship, and results obtained by the surgeon who operates only occasionally compare well with those of the thyroid unit.

"There are many other fallacies, but these are some of the most important. Thyroid surgeons in America are asking whether, in the face of the many dangers which beset every nodular goiter, such goiters ought not to be removed surgically without undue delay. No doctor in his senses waits for a breast tumor to metastasize before he advises operation. Why then should he wait for auricular fibrillation, pressure symptoms, carcinomatous change, etc., to develop in a patient with goiter before he advises operation?"

DR. THOMAS N. FREEMAN, JR. (LaGrange): All I would like to do is re-state the conclusions that there is no adequate liver function test and that we should all keep this in mind in treating chronic gallbladder disease, and that we do feel that pre-operative treatment as long as possible is advisable.

DR. CHARLES W. HOCK (Augusta): I appreciate the remarks that were made.

I want to emphasize one point; that is, that I wholeheartedly disagree with the idea that I have heard several psychiatrists make, that a diagnosis of "Irritable Colon" on "Functional Bowel Distress" should be made as a primary diagnosis. I think very definitely that such a diagnosis should be made only by exclusion. Many patients do fall in the category of needing psychotherapy, but a diagnosis of a functional disturbance of the bowel can be made by exclusion only.

DR. ARTHUR G. SINGER (Toccoa): First I should like to thank the discussers for their kind remarks regarding my paper.

In reply to Dr. Johnson's question about 24-hour retention cases and surgery, my experience parallels his exactly. I think he said he had one case that didn't come to surgery. Of all those I had with a high degree of retention after 24 hours, only one man did not come to surgery. He subsequently died of something else.

Dr. Dancy taught me something not forgotten but laid away on the shelf. I should have mentioned syphilis as a possible cause of pyloric obstruction but I think he will agree that it is not common.

Answering Dr. Patterson's remark in regard to the age of patients with pyloric obstruction his view is well taken. I am sure it does occur in other than the late middle-age group, but in the short series studied it was not my privilege to recognize it.

DR. JOHN S. ATWATER (Atlanta): I certainly appreciate the kind remarks made this morning concerning my paper.

So far as the question regarding the hereditary basis of polyps is concerned, in the original study the authors classified polyps as (1) single or solitary, (2) multiple, (3) disseminated, and (4) a diffuse type. This was in keeping with the classification previously made by Bargen.

As far as the solitary polyps were concerned in my study, there was little or no evidence that heredity played much of a role. For diffuse polyposis, quite the contrary was true and it seemed to play a very important role. Although the hereditary factor has been recognized for 60 years (in fact, the first case described by W. Harrison Cripps belonged to this group) there have been few first class family histories or pedigree charts available in the literature. Dukes collected all of the important charts up to 1930. By studying these charts it is clear that heredity does play an important role in diffuse polyposis. Dukes felt that this tendency to epithelial proliferation, which in turn has left a polyp formation, is inherited as a Mendelian dominant character and that it may be transmitted by either the male or female and that its generations tend to die out.

Bargen and Coffey, in a clinical analysis, found the heredofamilial tendency in 34.5 per cent of their cases.

McKenney has written that the disease is hereditary, familial and congenital. His contentions that there is a congenital basis are based on a large study of diffuse polyposis and particularly on the study of four siblings of ages 2, 5, 9 and 11 years. These children were examined by proctologic technic and in each were found polyps. The degree of increase in size of these polyps was directly proportional to the difference in the ages of the patients, the youngest having the smallest tumor.

There is no universally satisfactory polyp biopsy. One must remove the polyp together with its stalk and base. Manheim and Druckerman describe an instance in which a "cherry-size" polyp was present and observed in the sigmoid of a patient for 10 years. By way of the proctoscope a biopsy was taken and reported by a pathologist as a benign adenoma. Eight weeks after the biopsy was taken symptoms led to further examination and the polyp was now unmistakably carcinomatous.

Multiple sections may need to be studied in a biopsy before stating that a benign condition exists, and it is likely that in most instances one will not find simply a benign polyp. This is an important argument for prompt surgical removal of any polyp of the colon, whether sessile or pedunculated.

DR. DUNCAN SHEPARD (Atlanta): I was interested to hear Dr. Patterson say that he, too, had had no success with irrigation of T-tubes with ether. I would like to re-emphasize a point not emphasized in the literature—the pain felt on irrigation with ethyl ether. With the instillation of 1:500 nupercaine solution the stones can occasionally be removed with the tube or catheter clamped. Cholangiograms should be done on each and every patient until we have satisfactory pictures.

DR. CHARLES H. RICHARDSON, SR. (Macon): In closing our paper on *Surgery of the Thyroid*, I wish to thank Drs. Dancy and Patterson for their discussion.

Dr. Dancy raises a very interesting question when he asks "How much gland should be removed?" I don't know how this can be answered accurately except to say that the more gland you remove the better the chance for curing the patient; and the more thyroid surgery you do the more inclined you are to remove as much gland as possible. We always leave the posterior capsule, and the amount of thyroid tissue we leave depends largely on the age of the patient. The younger the patient, the more tissue we leave. Dr. Hertzler states in his book that an adult doesn't need any thyroid tissue. We have found this to be untrue because we have seen myxedema develop after thyroidectomy, so we try to leave just a little, realizing, however, that the more you take out the more effective is the operative result.

I agree with everything Dr. Patterson said when he

raised the question, "Can goiter be cured without surgery?" We don't think that it can except in the colloid goiter of adolescents, and we know they respond to iodine.

I would like to give Dr. Davison credit for the terminology of acute and chronic goiter, as I think he was the first person to use that classification.

We realize that thyroid surgery is a large issue to discuss in 12 minutes, and so I would like to emphasize what we tried to bring out in our paper; namely, the conclusions in our paper, published in this JOURNAL.

DR. IRVING L. GREENBERG (Atlanta): I don't know whether the lack of discussion indicates complete agreement of the discussers or whether they wanted to salve the feelings of the essayist.

I want to thank Dr. Davison for his remarks.

I should like, in closing, to make just one statement that may be disagreed with by some, but which I believe is a fairly accurate one. Mortality rates in most standard operating procedures, done by trained people, have reached about as low a level as possible. I think it is high time we paid more attention to getting patients back home, back to school and back to work earlier and in better condition. We should think more about morbidity without neglecting, of course, mortality.

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# EMBOLECTOMY FROM THE BIFURCATION OF THE AORTA

*Case Report*

T. C. DAVISON, M.D.
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*Atlanta*

Occlusion of the aorta at its bifurcation by an embolus is indeed a serious problem and is, fortunately, a rather rare occurrence. It not only endaugers the life of both lower extremities, but also the life of the patient. The first successful removal of such an embolus was as early as 1911. This diagnosis is easily made and is familiar to all, for it is described in most surgical texts. The management and treatment of such a patient is, however, still a problem in many instances. It is well known that if this malady strikes in a patient without too much arteriosclerosis, the treatment is certainly an immediate embolectomy. This emergency should be treated with the same speed and promptness as that which the perforated peptic ulcer now receives. In elderly individuals with little liver reserve and considerable arteriosclerosis the management is debatable. We are reporting such a case with fatal results, which we feel will serve to bring all of us several lessons in management.

## CASE REPORT

Mrs. J. B., a 69-year-old white female, was admitted to the hospital April 6, 1948, complaining of epigastric pain, nausea and vomiting. After thorough history, physical, x-ray and laboratory examinations the diagnoses of cholecystitis with cholelithiasis, diverticuli of the duodenum, and grade one arteriosclerosis with calcification of the aorta were made. The patient underwent a cholecystectomy and diverticulectomy on April 13. The pathologic reports showed chronic cholecystitis with cholelithiasis and acute duodenal diverticulitis.

The immediate postoperative course was essentially normal except that the patient was somewhat reluctant to adhere to the practice of early ambulation. The patient did, however, walk in the hall on the second postoperative day. The patient could not void spontaneously and thus required numerous catheterizations. Her Levine tube functioned well and was removed on April 16. The abdominal wound was well healed and the skin sutures were removed on April 18. The patient began having frequency and urgency of urinations, and while asleep had several incontinent voidings. She was cystoscoped April 24 by Dr. S. T. Brown, who reported moderate cystitis and normal pyelogram.

On the morning of April 27 (the 14th postoperative day) the patient asked for the bed pan, saying she didn't feel like getting up. Following this she repeatedly declared she felt "awfully weak." She was seen on our regular morning rounds, at which time the legs were examined, as is our routine, for any indications of phlebothrombosis, and no abnormality was noted. Her pulse rate was 68 per minute, the respiratory rate was 18 per minute and her temperature 96.8 F. At 10:30 A.M. the patient began complaining of severe pain in both legs, as well as the inability to move either leg. Both legs were cool and no pulsation could be palpated. A diagnosis of occlusion of the bifurcation of the aorta due to embolus was made.

It was realized that two courses of management were open—one conservative, the other radical. Because of the arteriosclerosis and calcification of the aorta and because of her obvious low liver reserve, and because of the urgent bidding of the family, it was decided that the conservative course be followed. The following therapy was begun: 10 cc. etamon (tetraethylammonium chloride) intramuscularily every eight hours; papaverine gr. ¼ per hypodermic every four hours; demerol 100 mg. per hypodermic as necessary. No anticoagulant was given. Both legs were wrapped loosely and the temperature kept between 70 and 80 degrees F.

The next morning the legs were mottled purple from the midthigh down, and cold. Obviously there wasn't sufficient collateral circulation to care for the nutrition of the legs. That afternoon, about 28 hours after occlusion, the family consented to embolectomy.

Under local anesthesia the left femoral artery was exposed in Scarpa's triangle and incised. The artery was filled with a soft thrombus and no bleeding took place. A large woven silk catheter coated with vaseline, and having a sloping end, was introduced upward into the iliac artery while strong suction was applied to the other end of the catheter. Thus the clots were seized, and after several partially successful attempts the embolus was freed. This was followed by a brisk pulsating hemorrhage, which was easily controlled. The distal portion of the femoral artery down to the popliteal fossa was cleaned of clots and the incision in the artery closed with No. 00000 greased silk. Good pulsation was obtained well below the site of the incision. A similar procedure was carried out on the opposite side with essentially the same results. Before the artery was closed 50 mg. of heparin were injected through the catheter up to the bifurcation of the aorta. The patient

was returned to her room in fair condition and it seemed that her thighs were slightly improved. She was given 250 mg. of heparin in Pitkins menstruum and 200 mg. dicumarol. Her prothrombin time was maintained less than 50 per cent of normal with additional dicumarol.

It was felt that this attempt was not successful, for certainly the smaller ramifications of the femoral artery were still occluded by thrombi. The etamon and papaverine were continued, yet the legs became rapidly worse and typical gangrene came into full bloom. It was decided that the patient would not survive a bilateral amputation. She died April 30, 1948. Necropsy was refused.

### *Discussion and Summary*

From this instance we feel that in spite of the condition of the patient's liver, the degree of arteriosclerosis and general debility, immediate embolectomy should have been performed. Certainly there was too much arteriosclerosis for the facilities of etamon to overcome.

1. We wish to emphasize that occlusion of the aorta should be treated with the dispatch such as is accorded other surgical emergencies.

2. In patients with less severe arteriosclerosis etamon may have some place, but we feel that it may not provide sufficient circulation for unlimited activity.

3. If a conservative method of management be chosen, then certainly an anticoagulant should be included.

4. We feel at present that conservative treatment of occlusion of the large vessels by embolus is embolectomy.

5. The source of this embolus remains a mystery.

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### VETERANS AND TROPICAL DISEASES

Veterans of peace-time service in the regular military or naval establishment, who served six months or more and who received honorable discharges, are now entitled to certain presumptions of service-connection for compensation purposes where tropical diseases become manifest after discharge, Veterans Administration has announced.

These presumptions, heretofore accorded only to wartime veterans, result from Public Law 748 of the last Congress. This law provides that a peace-time veteran who contracts a tropical disease within one year from discharge, or within the accepted incubation period for the particular disease, will be deemed to have incurred the disease in service, unless there is clear evidence to the contrary.

The Act also writes into law certain presumptions for wartime veterans which previously were granted under administrative authority. It further extends the list of chronic and tropical diseases to which such presumptions shall apply.

## THE CARE OF THE LUNGS DURING PREGNANCY

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All pulmonary misfortunes that beset the normal female may also occur when she becomes pregnant. The factors of even normal pregnancy can exert certain influences that may change the course and termination of the pathologic changes of the lung.

Pregnancy invites special care of the entire body. The expectant mother's first visit to her obstetrician results in a routine examination, including history, physical, and laboratory work. Neither her economic status nor the doctor's hurried office routine should limit the completeness or thoroughness of her examination. Histories of contact with contagious or infectious diseases should have sociologic investigation. Abnormalities require closer observation. Disease, when present, adds to the responsibility of the physician and to the dangers of the patient.

The following pulmonary groups are important to the obstetrician: pulmonary anomalies, allergic conditions, pulmonary infections, cardiovascular diseases, and referred pulmonary signs and symptoms, as well as the physiology of the lung.

### *Congenital Anomalies*

In congenital anomalies one deals, for the most part, with malformations of the lungs and diaphragms. The bronchoalveolar tree is endodermal in origin. The bronchial tree is canalized in the sixth intrauterine month. Later the terminal bronchi lose their epithelium and develop into alveolar sacs. If malformation occurs the pulmonary abnormalities may be diffuse or local.

Read before the Gynecologic Section of the staff of Crawford W. Long Memorial Hospital, Atlanta, Jan. 7, 1948.

These congenital abnormalities may have a marked similarity on x-ray films to the acquired ones.

Among the anomalies is agenesia of the lung, which is congenital and which is caused by the absence of a main bronchus. This condition is usually accompanied by an absence of the pulmonary vessels and often by cardiac malformations. Hypoplasia is the incomplete development of the bronchial tree. Bronchial development may be arrested at any stage with the resultant numerous and complex formations. Dysplasia is the absence of one of the layers in the bronchial wall. Congenital hyperplasia is typified by a polycystic lung. Cysts usually have no bronchial outlet. Subpleural blebs may be congenital or acquired. Histologic examination is necessary to determine their origin.

Bullous emphysema may be caused by inflammatory disease and subsequent scarring. This condition may also be caused by dystrophia of the elastic tissue with rupture of the interalveolar septa or by vascular changes which may cause tissue damage and rupture of the elastic fibers. Bullous emphysema may be simulated by bronchiogenic lung cysts as noted on x-ray films; histologically, however, the lung cyst has an epithelial lining.[1]

Asymptomatic tumors, as teratomas and mucous cysts, are frequently found on routine chest x-ray studies. When teratomas, mucous cysts, and other abnormalities are found in the expectant mother, all unnecessary operative procedures should be deferred until after delivery.

The diaphragms may be found in numerous abnormal positions and are usually asymptomatic. Abnormal attachments to the vena cava, pericardium and esopahgus produce more distressing symptoms due to torsion.

### *Pulmonary Allergies*

Many unsuspected allergies, which are important in the care of the lungs, are often revealed by a detailed history. Certain cases of premenstrual asthma are relieved by pregnancy. They are thought to be caused by ovarian insufficiency. If caused by hypofolliculoma, estrogens may be used with success.

Treatment of other allergic conditions is the same in pregnant and nonpregnant females. Secondary invaders may follow acute and prolonged asthmatic attacks and should be treated vigorously with antibiotics, iodides, aerosol, penicillin and adrenalin. Severe and persistent coughing during the first few months of pregnancy is dangerous.

### *Pulmonary Infections*

Pulmonary infections should be grouped under acute and chronic diseases. Among the acute infections are various types of pneumonia, influenza, acute phases of tuberculosis and mycoses. The chronic diseases comprise the aftermath of the acute diseases commonly recognized, such as bronchitis, bronchiectasis, mycoses, and pulmonary tuberculosis.

With the advent of chemotherapy and antibiotics, the mortality rates have declined. It is stated, however, that prior to the use of them, in 1932, the death rate per 100,000 from pneumonia of all forms in the total population of the United States was 76.8. In June of 1947 the rates per 100,000 population in 90 of the largest cities (in the Mountain States) still ranged up to 95.3 as reported in the 1947 U. S. Public Health Reports. It is still necessary, therefore, to be wary of the infection.

Immunization in the expectant mother is wise. The usual procedure is an injection of 1 cc. of a solution of pneumococcus polysaccharide containing types 1, 2, 3, 5, 7, and 8, and seven days later a single injection of A and B influenza virus vaccine. Its effect is not perfect, but results are good

enough to advocate its use. When there is an acute respiratory infection in the family, isolation of the patient should be advised as a prophylactic measure. In the pregnant woman definite attention should be given to the prevention of toxemia and cough.

Pulmonary edema and myocardial decompensation should be recognized early, and the cause determined. Part of the treatment is prevention by a complete examination with continued observation during the course of pregnancy.

The lung markings which comprised the vascular bed were observed in 480 pregnant women by me. This was accomplished by x-ray examination of each patient every three months. There is a definite increase in these markings as pregnancy progresses to full-term. This picture should not be confused with the pulmonary densities caused by disease.

*Pulmonary Tuberculosis*

Pulmonary tuberculosis deserves special consideration because, although it is an infection, the management, care, and treatment are different from other respiratory diseases.

Marital tuberculosis and the spread of tuberculosis in families are influencing factors in evaluation of tuberculosis, arrested or active, coincident with pregnancy. Likewise, the social element must not be overlooked. Each expectant mother should be questioned regarding her living conditions, her associates, her family, and possible past or present contacts. Her economic standard of living and its possible influence on her health should be evaluated.

It is characteristic of tuberculosis that it is often concentrated in a few comparatively congested areas inhabited chiefly by families of the low income brackets. In such an environment many factors favor the spread of disease.

It is known that 5 per cent of contacts develop active adult pulmonary tuberculosis within six months after the first case is found in each respective family. Improved economic and social conditions have been known to lower this rate only to 4.75 per cent. The attack rate among a general population in congested areas is only about 0.5 per cent. The greater tendency to spread in certain families is demonstrated by the fact that in families having more than one case, even when no positive sputum can be found, there is a high attack rate.[3]

*Marital Tuberculosis*

Marital tuberculosis may be defined as the development of clinical tuberculosis in both husband and wife. One must not, however, apply this definition dogmatically, for it cannot, in all cases, be assumed that the disease has been transmitted by the consort. It is also possible for a tuberculous individual to marry a supposedly nontuberculous person who at the time of marriage had an unrecognized latent or active tuberculosis.

A review of the literature regarding marital tuberculosis reveals that conclusions of various writers contradict each other. The frequency of marital tuberculosis is reported by one writer as 2.9 per cent, and by another as 58 per cent, with variations between these figures by other observers. The majority believe that tuberculosis in both husband and wife is not common. Many, however, believed the incidence to be greater than in the general population.

A study was made of marital tuberculosis based on 11,193 cases of tuberculosis reported[4] during a ten-year period to the Health Division of St. Louis. From this group came 210 couples (420 persons) all with clinical, active disease. It was found that while only 3.8 per cent of the reported cases of tuberculosis in married people are in both husband and wife, nevertheless the

risk of contracting the disease when in marital contact with an active case is 29 times greater than it is in the general population. About one-third were Negroes—the rest white. Sputum was positive in both consorts in 20 per cent of cases, positive in either wife or husband only in about 25 per cent. In 54.5 per cent the sputum was negative or questionable.

Another report[5] of 2,300 cases of pulmonary tuberculosis with positive sputum was investigated. It was found that 12 per cent of their marital partners had pulmonary tuberculosis with positive sputum. In an additional 7 per cent, routine examination revealed definite pulmonary tuberculosis with negative sputum; 27 per cent showed pulmonary calcifications and very discrete fibrotic lesions on x-ray films. The above figures are considered to be at least three times as high as those found on routine examination of not particularly exposed groups.

Widows and widowers with pulmonary tuberculosis appeared to have lost their partners more often from pulmonary tuberculosis than widows and widowers with nontuberculous disease. The average duration of exposure was two years and four months. The average time interval between the onset of disease in the first partner and the onset in the partner developing tuberculosis subsequently was five years. In 48 per cent of the cases the interval was longer than three years.

Two periods are considered particularly dangerous for the exposed partner: (1) the first two years of exposure during which time the persons with low resistance to tuberculosis are believed to become infected; and (2) the two years following the death of a partner, during which more resistant individuals may develop the disease, due to massive contamination preceding death.

The relatively high incidence of pleurisy as a mode of onset in marital tuberculosis was noted. It was found in 13 per cent of the cases.

### *Premenstrual Fever*

A comment on premenstrual fever in tuberculosis is necessary because it is a pertinent part of the patient's history. This elevated temperature continues after conception. Of 50 women[6] of childbearing age with pulmonary tuberculosis, premenstrual changes occurred in 43. The reactions were of the same type as found in 15 normal healthy young women who were used as controls. The average duration of the changes was nine days in the diseased patient and five days in the normal controls. In 6 of the diseased patients the characteristic changes were absent when a temporary increase of tuberculous activity occurred. During this exacerbation, shown either by a higher temperature recording or by a greater variation in the morning and evening temperatures, the premenstrual phase invariably disappeared. One of the 43 patients possessed charts, extending over a period of five years, showing an original premenstrual rise in temperature lasting for 14 days; now, when the degree of activity of the disease is much less, the rise lasts only for five days. In 4 patients the day preceding menstruation was marked by a sudden extreme rise in temperature.

### *Hormone Influence*

The question of hormonal influence on tuberculosis during pregnancy is yet to be investigated. We know something of their influence on tuberculosis in the nonpregnant female. Administration[7] of estrogens eliminates menstrual flare-ups only in a certain percentage of cases; namely, hyposecretion of estrogen. In cases with premenstrual tension the administration of progesterone, and especially testosterone, gives excellent results by influencing favorably menstrual and premenstrual disturbances; that is to

say, congestion of the breasts, uterine pain, premenstrual hemoptysis, chest pain, febrile episodes, and exudative extension of the lung lesions.

On the other hand, in some cases testosterone has produced hemoptysis and congestive flare-ups which subsequently could be influenced by estrogens. It is therefore assumed that two modifications of the soil have an unfavorable effect on tuberculosis —hypersecretion and hyposecretion of estrogen. The following observation also corroborates this opinion: some patients have been at first improved by the administration of a hormone and then made worse by prolonging the treatment. The administration of the antagonistic hormone, which had been ineffective at first, was at that time very useful, at least for a short period.[7]

*Effect of Pregnancy on Tuberculosis*

To the chest specialist an extremely worried countenance of a married female patient means one of two things: (1) fear of a positive sputum, and (2) fear of pregnancy, as evidenced by "How's my sputum, Doctor," or "I'm late this month." But later the symptoms of tuberculosis seem to be forgotten by the patient because she is so engrossed in the anticipated addition to the family. The attending physician must continually be on the alert for any indication of new or reactivated pulmonary disease. In the tuberculous pregnant female that does not suspect pulmonary disease, it will be found that about 36 per cent will have minimal disease, 38 per cent will have moderately advanced disease, and 26 per cent will have far advanced disease. These percentages will depend on many variable factors. Many will deny all symptoms, but upon further interrogation cough will be found to be common; less frequently will be found dyspnea and lassitude, loss of weight or failure to gain weight, hoarseness, night sweats, and streaking.

The effect of pregnancy on tuberculosis is a controversial problem and has been brought up-to-date by a review of the literature by Friedman and Garber.[10] To the chest physician and the obstetrician it is evident that the factors involved in making a decision as to management of patients with these conditions are numerous and extremely variable. A practical approach, tempered by experience and conservatism rather than a willingness to take chances, or a "wait and see" policy, will bring forth the greatest number of healthy females who can bear other children at later dates. When tuberculosis is complicated by the added risks of pregnancy, the physician and patient have a truly formidable problem.

Death rates for tuberculosis have been much reduced in women of all ages, but among the childbearing age one out of six deaths is due to tuberculosis and, as such, it is still the leading cause of death in this group of women (ages 15-44).[11,12] Thirty-two thousand pregnancies occur in tuberculous females annually.[13]

Hippocrates[14,15,16] believed that "Pregnancy is the best cure for consumption." Lewis[16] followed by Grisolle and later by Schaute and Young,[15,17,18] reversed the practice to the other extreme; i.e., abortion on all pregnant tuberculous females. A conservative stand half way between these two extremes is the trend of today. This was brought about by Jameson[16] in 1918 when he indicated that there was little, if any, evidence that tuberculosis was more frequent in the pregnant state or immediately thereafter. Fluoroscopic and x-ray examinations of all pregnant females in large prenatal clinics reveal an incidence of from 0.7 to 1.8 per cent of clinically important tuberculosis[19,20,21,22] which is comparable to the same age group of nonpregnant women.

As to the effect of pregnancy, labor and puerperium on the course of the tuberculous process. there are two schools of thought and because of the controversy and importance of this point both sides should be presented. Those who feel that they cause adverse effects on the tuberculous process are Norris, Landes, Young[23 24 15 25 26 27 13 28 29 30] and Cutler.[31] Conversely, Ornstein, Epstein. Koonat, Barnes, Hull, Skillen, Bogen[32 33 34 16 35 11 36 17 37 18] do not feel that the course of the tuberculosis is influenced adversely, but rather that the virulence of the tuberculous infection and the efficiency of the treatment of the tuberculosis determine the outcome. The far advanced or caseous type contributes to higher mortality rates, regardless of the presence or absence of pregnancy. Minor changes for the better or worse of the tuberculous pregnant woman can be attributed to the reflections of the normal course of events in pregnancy.

One point not mentioned in the literature which I feel has more than casual influence on minimal and moderately advanced pulmonary tuberculosis is the mental attitude of the patient. It is well known that mental rest is just as necessary as physical rest in the cure of this disease. The expectant mother has a desirable and comforting event to anticipate. This pleasant anticipatory attitude may be responsible for much of the improvement. Also, as pregnancy proceeds she takes more rest than the average non-pregnant female. Contrary to the previous conception, while the diaphragm may rest at a higher level, the amplitude of its excursions is the same in both the pregnant and non-pregnant state.[23 38 39 40] It is my impression that the lowering of the level of the diaphragms at delivery and consequent expansion of the lung, the physical exertion of delivery, lactation, anxiety, and physical unrest due to constant care of the new baby all are causative factors in the reactivation of arrested lesions and adverse favorable progress of the active cases. It is at once apparent that prophylactic measures to combat the above are necessary. The obstetrician must use all measures available to prevent fatigue at the time of delivery. Lactation should be suppressed in the presence of pulmonary activity. The care of the new baby (complete isolation from the mother) is a domestic problem which must be solved prior to its arrival.

A live birth may be expected in 81 per cent of tuberculous pregnancies and the fetus is usually normal.[32 17 41 42 43]

### *Congenital Tuberculosis*

Congenital tuberculosis is important to the obstetrician. Pagel and Hall[9] conclude that when an infant dies in the first few weeks of a tuberculosis incompatible with postnatal infection because of extent, the diagnosis of congenital tuberculosis is warranted. In such cases a primary lesion is found in the liver with extensive involvement of the lymph nodes at the hepatic hilum. In rare cases this primary complex is absent. Instead, extensive pulmonary changes are found. These differ from the usual changes of postnatal tuberculosis in that no distinct primary focus is found. The lungs are peppered by small submiliary deposits. The hilar nodes are involved in a diffuse manner without topographic gradation. Seven such cases were reported up to 1939. There is a report of a case of an infant who died on the seventeenth day of life. The mother was perfectly well. The deposits in the lungs were found to be bronchiogenic in nature. The extensive cellular reaction about the lesions indicated an age greater than seventeen days. These lesions resembled those found in experimental animals infected intratracheally by tubercle bacilli. The conclusion was that this was a case of prenatal tuberculosis resulting from aspiration of infected amniotic

fluid.[9]

It should be a universal rule that all babies be separated from tuberculous mothers when there is even a question of activity and kept separated until healing has been completed. This should be understood prior to delivery and should be enforced.

Ehrlich[8] has made an exhaustive study of the date of birth and the likelihood of dying from pulmonary tuberculosis and finds that no relation exists. Her study is interesting and informative.

Premature delivery,[44 45 27 41 43] especially in far advanced cases, is still open to investigation, for positive proof has not been offered as yet.

*Therapeutic Abortion*

There are two views as to the desirability of therapeutic abortion in the first trimester of pregnancy. A great array of statistics and publications have been massed on both sides by Friedman and Garber[10] who state, "The benefits to be derived from this procedure are unproved and equivocal in spite of the fact that some authors advocate it quite freely in the face of active disease." Further, they state, "Conservative management is the solution to the obstetrician's problem, but the phthisiologist's responsibilities in pregnant tuberculous females are much greater." This statement can be true only up to a certain point, and the responsibility should not be shifted entirely to the phthisiologist. To achieve the best therapeutic results in these cases, it may be advisable to treat the tuberculosis as if no pregnancy existed,[24] but the pregnancy cannot be treated as if no tuberculosis existed. Lack of appraisal of the conditions under which the patient and her child will be forced to live after the delivery is only one of the causes of incorrect decision in regard to therapeutic abortion. I feel it is better to have a well mother who can rear healthy children later than to have a chronically diseased mother and an infected child, both of whom will eventually spread and probably succumb to the disease. Statistics are not available on how many children are successfully and effectively separated from tuberculous mothers, but the proportion is extremely small. This is a case of practical application versus theoretical and idealistic conclusions.

As stated above, the tuberculous condition should be treated in the usual manner, employing rest and appropriate collapse therapy together with all other measures used in the routine treatment of this type of case.

The ideal situation is to recognize, treat, and cure the tuberculosis before marriage and, if not then, it should be accomplished before pregnancy. Insurance statistics indicate that a patient should be completely healed for five years before being issued insurance, therefore it would seem that a two year interval is the minimum after becoming completely arrested before pregnancy should be allowed.

To approach the therapeutic aspect of this desired perfection, it is best to x-ray all persons once a year. The next best approach is to x-ray all females past puberty and prior to marriage and once a year thereafter. These ideals cannot be accomplished until the public is better educated about tuberculosis, but each obstetrician can and should have all expectant mothers x-rayed during their initial examinations and repeat the process if and when indicated. Fluoroscopy is not sufficient because its use requires the presence of an expert. Thirty-five millimeter films which are used in mass surveys can be used and are less expensive. Tuberculin testing has been used extensively prior to x-ray examinations, but several factors (dilution, technic, freshness of solution, inexpensive small x-ray films, etc.) render the procedure almost useless except for mass studies when used as a screen for

further x-ray examination. The use of the stethoscope in the diagnosis of pulmonary tuberculosis has faded out as completely as the horse and buggy. It has been shown that pulmonary tuberculosis is more common than syphilis.[19 46]

In the tuberculous female long periods of anesthesia and major operative procedures (cesarean section excepted) are definitely contraindicated. Collapse procedures such as pneumoperitoneum and pneumothorax are of value, but discretion is the better part of valor. Especially, the patient should be watched at the time of delivery and afterwards. It is advised that not only the active but arrested pulmonary cases have roentgenograms of the chest as soon after delivery as possible. It is also to be remembered that numerous and frequent pregnancies are contraindicated[47] and are indications for sterilization.

New and startling work is being accomplished with BCG vaccination. This is the Bacillus Calmette-Guerin product from a bovine tubercle bacillus cultivated on bile-enriched media. The bacillus has lost the ability to produce disease in animals or man but can produce antigens when introduced into the body. This has occurred with other vaccines and drugs, and still more evidence is necessary to prove the permanent benefit of BCG vaccination.

Birkhang[50] states, "BCG vaccination is today generally accepted by the medical profession and laymen in Scandinavia as an important adjuvant to establish antituberculosis measures, because the vaccine is absolutely harmless and produces a relatively high degree of protection against an exogenous tuberculous infection.

"Intracutaneous or transcutaneous BCG vaccination renders nontuberculin reactors tuberculin-positive in more than 90 per cent of the cases within two months after vaccination. In the absence of known tuberculous infection, the duration of allergy following BCG vaccination lasts more than five years, although in some instances it may terminate after one year.

"During the period of BCG vaccination allergy and exposure to known tuberculous infection, BCG affords an almost complete protection against the morbid postprimary tuberculous lesions and a relatively high protection against secondary tuberculosis, including clinical pulmonary disease.

"These nonreactors have proved more susceptible to progressive tuberculous disease when infected than those in whom a positive tuberculin reaction indicates a previous infection.

"Since 1940 more than 100,000 persons have been vaccinated with BCG in Norway, 58,000 army conscripts and 250,000 civilians in Sweden, and 150,000 persons in Denmark."

Tuberculous mortality among vaccinated children has been reduced to one-fourth or one-fifth of the nonvaccinated infants.[57]

Most of the work with BCG has been done in foreign countries; however, their results seem to indicate that all infants should be vaccinated with BCG before they have time or opportunity to become tuberculin positive. This is esepecially true when there is an infection in the mother.

*Summary*

Malformations of the lungs and diaphragms have been described. A knowledge of these conditions is desirable when examining the x-ray films of the mother, and when making the first examination of the newborn baby.

Allergies add to the normal burden during pregnancy and deserve attention.

Pulmonary infections, both acute and chronic, have been discussed. In addition to antibiotics, it was suggested that immunization with polysaccharide and A & B influenza virus vaccine be done.

The spread of tuberculosis in families containing a tuberculous patient has been discussed, because the pregnant mother many times lives in such a home. Improvement in the economic status of such family has shown that the attack rate is reduced only 0.25 per cent.

Marital tuberculosis has been defined, and its dangers to others were discussed.

Premenstrual fever was discussed because of its continuation after conception, and a history of its existence is important in determining the age of the pulmonary disease.

Congenital tuberculosis is rare but should be recognized. The pathologic changes in the lungs of the tuberculous newborn baby were described.

Effect of pregnancy on tuberculosis was discussed, with a brief review of the literature.

Effect of the pregnancy, the labor, and the puerperium on tuberculosis was discussed, with a brief review of the literature.

Live births in tuberculous females and the percentage of normal infants anticipated have been described. The separation of the newborn from active tuberculous mothers was stressed and discussed.

The responsibility of the phthisiologist and the responsibility of the obstetrician have been discussed.

Failure to appraise the future of the mother and the expected child was given as one of the reasons for incorrect decisions when considering a therapeutic abortion.

Ideals in the management of an x-ray program for females were given.

BCG vaccination for all newborn babies, especially in homes where there was a tuberculous patient, has been advocated.

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# THE ROLE OF THE GENERAL PRACTITIONER, THE GENERAL SURGEON AND THE SPECIALISTS—WHERE DO WE GO FROM HERE?

James Miller Barnett, M.D.
*Albany*

Some years ago there was translated from the Polish into English a remarkable novel of the beginning of the Christian era, bearing a Latin title, "*Quo Vadis.*" It had to do with a very unpleasant person called Nero, Emperor of Rome, and the persecution of the early Christians. The title "*Quo Vadis,*" which means "whither wandering?" or "Where are you going?" has always intrigued me; it's a question we would do well to ask ourselves at frequent intervals, and never more so than right now.

The tempo of the world has quickened: customs, methods, governments, laws, traditions, and beliefs are changing. Around the world the things that have been are on trial for their lives before the bar of the things that are.

To deal intelligently with the query, "*Quo Vadis*", or "Where do we go from here?" involves some consideration of other questions—whence did we come, where have we been?

So we will look back along the trail a bit whence we have traveled.

In 1846 nearly all physicians were general practitioners. Certain persons became especially interested in surgery, but they seldom abandoned general practice entirely. This combination of the physician and surgeon in one practitioner came down from a time of primitive colonial conditions when differentiation would have been impracticable. As a result, surgery always maintained equal prestige with internal medicine, in contrast to the professional and social distinctions which have been traditional in Britain.

It is usually assumed that specialization was lacking at that time, simply because there was not enough knowledge to justify it. This was indeed one factor in the situation. But there was another basic explanation. Prior to about 1830 American physicians did not usually think in terms of a localized pathologic process or of specific diseases. Speculative pathologic changes had dominated medical thought up to that time. All forms of illnesses were ascribed to one or two generalized conditions, such as impurities of the blood or the existence of excessive tension or laxity in the nervous and vascular systems. They were appealing theories, since they solved all pathologic problems at once and also opened up a royal road to therapeutics. If all illness was due, as Benjamin Rush claimed, to excessive tension in the blood vessels, then all patients could be cured by bleeding to relieve

that tension.

As long as all forms of illnesses were viewed as expressing a single, underlying condition, there was no need for specialization in practice. Incidentally, there was also no use for major surgical operations, for one could hardly operate on the blood or on a vague condition common to the whole vascular system. Hence, surgical practice remained largely a matter of fractures, amputations, and other superficial emergencies. Here again there was little need for specialization.

Only when a localized, structural basis for disease replaced the speculative systems was specialization made possible. When specific diseases were identified by correlating lesions with symptoms, the possibility of treatment by removing these lesions became obvious. Surgery was, therefore, beginning by 1840 to move from the periphery toward the center of medical practice. And there was now some reason for specializing in other fields than surgical practice, in work on a particular part or system.

But these new points of view, imported from Paris by returning American students after 1820, percolated slowly into average practice. Not until after the Civil War did specialization really get under way, even in the cities. There was strong opposition at first, partly because of the fear that it would injure the interests of both patient and practitioner, and partly because in the earlier day only quacks had claimed to specialize. Dr. S. Weir Mitchell could recall the time in Philadelphia when to specialize meant to be professionally ostracized.

However, it is a long cry from these early days to modern ones, and many of us are wondering whether the swing of the pendulum has not landed us out on the end of a limb. Now do not misunderstand me. I am not against real and proper specialization. That specialization can only begin after an overall mastery of general medicine and general surgery.

The American lay public resembles much the French. They jump at conclusions and rush to extremes. They are highly emotional and respond to sensational newspaper headlines. This point was emphasized by Dr. Arthur Sullivan, Managing Director, Interstate Post-Graduate Medical Association of North America, as reported in the *St. Louis Globe Democrat*, October 14, 1947. Dr. Sullivan showed that people guess what is wrong with them and then select the specialist they think they should go to first, without consulting the family physician or general practitioner. In this way valuable time and money are lost, he declared. Dr. Sullivan estimated that 80 per cent of all cases can be handled by the general practitioner. "The general practitioner," he emphasized, "is the *backbone* of the medical practice."

According to Dr. R. B. Robbins in a compelling article in the November 22, 1947, A.M.A. Journal, titled "Hints in General Surgery," the family physician, even though he does not practice surgery, is interested in surgery and surgical progress. He says: "Many general practitioners do what is known as ordinary surgery and do it well." Then Dr. Robbins calls attention to some of the new and improved technics that will help the general practitioner as well as the surgeon. Among these new developments we find:

(a) Improved technic in anesthesia.
(b) Improvements in pre- and postoperative care and operative technic.
(c) Newer agents in the surgical armamentarium.
(d) Surgery of the gallbladder.
(e) Surgical trauma and treatment in hernia.
(f) Surgical treatment of the thyroid gland.
(g) Internal obstructions.
(h) Cancer of the bowel.
(i) Surgery of the breast.
(j) Surgical treatment of the stomach.

The general practitioner, especially in

the rural districts, sometimes faces an emergency when there is insufficient time to get the patient to the city hospital. In such cases it is often necessary to give an anesthetic.

Dr. Allen O. Whipple, of New York City, in his second Martin Lecture before the Columbia University College of Physicians and Surgeons, pointed out the need for closer cooperation between surgeons, specialists, and general practitioners. Drawing a parallel between the success of the atomic bomb and the fight against cancer, he showed that the success of developing the bomb was not due to a single notable discovery, but through collecting and correlating an enormous amount of scientific data already discovered in many universities and research laboratories. Unfortunately, there has been no such amount of authentic data discovered in the case of cancer. There is still a vast amount to be learned about normal as well as abnormal cell growth. This year Congress appropriated about 14 million dollars for next year's cancer budget. However, the problem is not one of money, but of staffing.

Dr. Whipple explains that morphologic studies of transplanting animal tissues has reached an impasse. Newer studies of the biophysics and biochemistry of the carcinogens and the steroids of the hormones demand intensive study and cooperation of experimentations in those fields. New technics and more powerful instruments like the electronic microscope and the spectrophotometer will help. Says Dr. Whipple: "Inasmuch as radical surgery involves so many tissues and organs, and is dependent upon the understanding of minimal tissue damage and wound healing, and an appreciation of the importance of blood supply, tissue nutrition, and the prevention of hemorrhage and infection, the surgeon must have sound training and experience in general surgery before he begins his intensive training in the so-called cancer surgery." Operative procedures which 20 or even 10 years ago were considered prohibitively dangerous are now being done in all well-equipped and well-staffed clinics. "The clock is no longer the measure of a surgeon's competency," Dr. Whipple pointedly reminds us.

A compelling editorial in the November 1947 issue of the *Journal of the Medical Association of Georgia*, titled, "Medicine Still an Art as Well as a Science," by Dr. Frank K. Boland, calls attention in this day of specialization to some fundamental truths we all should digest and remember.

In the beginning, medicine was entirely an art—there was little or no science. But the addition of certain instruments, like the microscope, hastened its progress toward the scientific stage. Says Dr. Boland: "Today with increasing knowledge of physiology, pathology and bacteriology, and the rise of specialism, medicine tends to become more a science and less an art . . ." He shows that intellect, emotion, habits, inheritance and environment are to be reckoned with. Often judgment and diplomacy of a superlative degree are required to cope successfully with the peculiarities and idiosyncracies of the patient, although the scientific aspects of the case have been analyzed and interpreted perfectly. There must be exercised patience, kindness and sympathetic understanding. Patients are human beings, and sick human beings are not normal. So we should all know something about psychiatry as well as medicine and surgery. Who, more than the general practitioner, the family physician, knows this only too well? He does not need a course in psychosomatic medicine to teach him that.

### *Where Do We Go From Here?*

Since 1917, when the first specialty board was established for ophthalmology, there

has been a steady increase in the number of specialists and sub-specialists. However, as we may see at a glance at any graph for this purpose, general practitioners greatly out-number specialists almost four to one.

Looked upon too often as "just a doctor," the general practitioner for years has been the prime guardian of individual health. Since the health of the individual is the basis of community and national health, the importance of the role of the general practitioner makes itself immediately apparent.

James E. Paullin, a distinguished medical specialist of Atlanta, recently told a meeting sponsored by the American College of Surgeons that America probably has more specialists than it needs and that the role of the family doctor or general practitioner will grow more important in coming years.

Far be it from me to attempt to belittle the specialist. He has his place and he is a necessary link in the therapeutic chain. But every specialist should have a good general training before he goes in for specialization. Dr. Paullin rightly observes: "A good general practitioner has the health and life of his patients in his hands, and if serious complications arise he will call in consultants." These may be specialists.

The family doctor treats every member of the family and he knows them intimately. This background aids him greatly in diagnosis and treatment. There is no doubt but that his place is still secure. By elevating the status and dignity of the general practitioner, we elevate the status and dignity of American medicine as a whole.

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The Post-Graduate Committee of the Medical Association of Georgia plans to hold two seminars during the year, one at Emory and one at Georgia. Note next month's JOURNAL for details regarding dates, subjects, etc., a program designed particularly for the general practitioner.

## EXAMINATION FOR REGULAR CORPS U. S. PUBLIC HEALTH SERVICE

A competitive examination for appointment in the Regular Corps of the United States Public Health Service in the grade of assistant surgeon (first lieutenant) and senior assistant surgeon (captain) will be held in October. The written examination will be conducted October 4, 5, and 6 at places convenient to the candidates. The oral examination will be held at various points throughout the country.

All applicants must be at least 21 years of age and citizens of the United States, must present a diploma of graduation from a recognized medical school and satisfactorily pass a physical examination performed by Public Health Service officers.

Physicians beginning internship on July 1, 1948, will be admitted to the examination. Successful candidates will be placed on active duty in the Regular Corps upon completion of internship on July 1, 1949.

Applicants for the grade of assistant surgeon must have had at least 7 years of educational and professional training or experience, exclusive of high school. Applicants for the grade of senior assistant surgeon must have had at least 10 years of educational and professional training or experience, exclusive of high school.

Entrance pay for an assistant surgeon with dependents is $5.011 a year and for senior assistant surgeon with dependents $5,551 a year. This includes the additional pay of $1200.00 for medical officers, as well as subsistence and rental allowance. Provisions are made for promotions at regular intervals up to and including the grade of senior surgeon (lieutenant colonel) and for selection for promotion to grade of medical director (colonel) at $9,751 a year. Retirement is authorized at either completion of 30 years' service or at the age of 64. Full medical care including disability retirement at three-fourths pay is provided.

Application forms may be obtained from Public Health Service Hospitals, District Offices or by writing to the Surgeon General, United States Public Health Service, Washington 25, D. C.

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## AUSTRALIAN DOCTORS NULLIFY PHARMACEUTICAL BENEFITS ACT

Enactment by the Australian government of a Pharmaceutical Benefits Act, which went into effect June 1, "has been nullified by the combined action of the medical profession," according to the Australian correspondent of *The Journal of the American Medical Association*.

Writing in the July 10 issue of *The Journal*, the correspondent says that the act provides free medicine to any Australian citizen, providing the medicine is prescribed by a doctor on specific forms furnished by the government and within the restrictions of a formulary drawn up by a committee appointed by the Minister for Health.

The correspondent said in part:

"Far from being annoyed at the refusal of the doctors to take part in the scheme, the Australian public is apathetic, and adopts the attitude of a detached spectator of a battle of tactics. There is a growing public aversion to socialization in Australia. Two days before the plan was brought into force, the people, through a referendum, gave an emphatic negative to the government's referendum on price fixing.

"Less definite but equally cogent objections to the scheme are:

1. It is the beginning of a national medical service by back-door methods.
2. It is both difficult and dangerous to make a patient's disease fit a formulary.
3. The scheme placed in the hands of the director-general of health the complete control of medical prescribing. It was an example of government by regulation."

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The Medical Association of Georgia will meet in Savannah, May 10-13, 1949.

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

### AUXILIARY NEWS

Georgia is justly proud of the splendid accomplishments of Mrs. Eustace Allen, of Atlanta. She gave much to the Woman's Auxiliary to the American Medical Association. Her outstanding ability as a presiding officer at the recent convention held in Chicago brought much favorable comment. Among others present at this convention were Mrs. Sam Anderson, Milledgeville, president, Woman's Auxiliary to the Medical Association of Georgia; Mrs. J. Harry Rogers, Atlanta, president-elect of the State organization; Mrs. Bruce Schaefer, Toccoa, parliamentarian; Mrs. Olin Cofer, Atlanta, president, Southern Medical Association; Mrs. Allen Bunce, Atlanta; Mrs. E. F. Chaffin, Toccoa; Mrs. T. L. Ross, Jr., Macon; Mrs. Marcus Mashburn, Cumming; Mrs. Harvey E. Griggs, Conyers; and Mrs. R. B. Crichton, Milledgeville.

The Sixth District Medical Association and Auxiliary met in Milledgeville June 30. Mrs. J. R. S. Mays, Macon, district manager-elect, presided in the absence of Mrs. Fred Rawlings, Sandersville. The meeting was held in the parlor of the Georgia Military College. Bridge and other games were played at the Country Club. Mrs. Sam Anderson and Mrs. Crichton, both of Milledgeville, spoke on the national meeting in Chicago. The doctors and auxiliary members were served buffet supper at the Country Club. There was a splendid attendance.

The State Conference of the Auxiliary Executive Board will be held in Macon, August 17. Opening at 10 o'clock, followed by an afternoon session. Mrs. Anderson urges everyone to be present at this meeting as there will be several important things to be discussed at that time.

Mrs. Clifton G. Kemper,
*Chairman, Press and Publicity.*

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

AUGUST, 1948

## LISTS SIX RULES TO GUARD CHILDREN AGAINST POLIO

Despite the lack of a definite preventive for infantile paralysis, parents may guard their children this summer by following a few simple rules, Dr. Hart E. Van Riper, of New York, says in the current issue of *Hygeia*, the health magazine of the American Medical Association.

Dr. Van Riper is medical director of the National Foundation for Infantile Paralysis and at one time served as a resident in pediatrics at Children's Hospital in Cincinnati. He has been connected with the National Foundation since 1945.

Dr. Van Riper listed these safeguards:

1. Practice cleanliness.
2. Avoid new contacts.
3. Don't get overtired.
4. Avoid chilling.
5. Don't swim in polluted waters.
6. Call your doctor at once.

"These are simple safeguards, but important; especially the advice to call your doctor at the first suspicious signs. Early medical attention is the best protection parents have against infantile paralysis," Dr. Van Riper's article says, adding:

"An answer to the question of where infantile paralysis will strike this summer cannot be wholly relied upon. From studying the visitations of previous epidemics, it is evident that infantile paralysis moves in cycles with a four to six year lapse between epidemics.

"In attempting to guess where infantile paralysis can strike in this summer of 1948, we can see that the states along the Atlantic Coast, from South Carolina northward, have been relatively free from epidemics of infantile paralysis for the past four to six years. It is possible, then, that the states along the Atlantic seaboard, from South Carolina to Maine, may experience a resurgence of virus activity.

"But whether outbreaks will actually take place and how severe they will be, no one can be certain. Nor should there be any undue alarm in the areas named. All efforts have been made to safeguard these potential trouble areas.

"Severe infantile paralysis epidemics once seemed to be a problem peculiar to the American people and a few of the nations of Europe. Today infantile paralysis is considered a dangerous world health problem. The virus is evidently free from climatic restrictions. Cuba as well as Iceland has recently experienced epidemics. Nor has geographic remoteness been a barrier to the disease.

"Many foreign countries face infantile paralysis as a new health problem. It is to our interest as well as theirs that the knowledge we have laboriously accumulated be shared with them and that they in turn acquaint us with their experiences.

"It is for this purpose that the National Foundation for Infantile Paralysis is sponsoring the First International Poliomyelitis Conference to be held at the Waldorf-Astoria Hotel in New York City beginning July 12.

"There is one problem which should take precedence over all others—'What is infantile paralysis?' We may be fighting not one disease, but a whole family of only slightly related diseases.

"We do know already that there are many strains of infantile paralysis virus capable of producing the clinical symptoms. But we don't know how closely related these virus strains are, or, indeed, if they are biologically related at all; and we do not know whether special measures of prevention or treatment are necessary for each individual type.

"Until this problem is solved there can be no certain prevention or cure. Through the research studies now going on and through frank and open discussion such as will be possible at the First International Poliomyelitis Conference this and the other polio problems confronting us may be solved."

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## GENERAL HEALTH HAS LITTLE EFFECT ON TOOTH DECAY

Observing that a group of Filipino children in poor general health had much better teeth than a group of local children in Hawaii in excellent health, Dr. Nils P. Larsen, Honolulu, says in the July 3 issue of *The Journal of the American Medical Association* that dietary factors are probably the determining element in freedom from tooth decay.

Dr. Larsen's paper, entitled "Tooth Decay in Relation to Diet and General Health," was based on extensive studies made of more than 1,000 children living on sugar plantations in Hawaii and 100 children who were brought in from the war-torn Philippines.

Although tooth decay in general is higher among children on a diet with a high carbohydrate content—that is, one of starches and sweets—Dr. Larsen emphasized that this is not always the case; that some children on such diets have very good teeth.

The reported observations in Hawaii suggest that other factors than the acid base balance or vitamin A may account for the striking difference in decay in the various groups of children observed.

"Heredity," he says, "does not seem to play an important role in this condition. Hawaiians on the Polynesian diet for 800 years had excellent teeth, while first generation Hawaiians on the Oriental diet of rice had poor teeth. Filipino children in the Philippines had little tooth decay, while Filipino children in Hawaii had much."

Indications are, Dr. Larsen said, that it is not sugar or vitamin intake themselves which determine tooth decay or lack of it, but rather whether certain protective substances, such as fluorine or oxalate, are added to the diet.

"The Hawaiians on their ancient diets consumed much seafood which is high in fluorine," Dr. Larsen says. "They probably also swallowed more ocean water, which is high in fluorine. They also ate much taro and poi which is high in oxalate—a possible tooth decay preventive, as might be vitamin K which is present in raw sugar cane."

Dr. Larsen indicated the possibilities are strong that peoples with the best teeth are those whose diet consists of a combination of foods whose chemical makeup prevents the over-activity of acid-forming bacteria. Such diets contain not only fluorine and oxalate, but foods with a high alkaline residue.

## WOMEN PAST 49 RESPOND BEST TO TREATMENT FOR CANCER OF CERVIX

Women past 49 respond more favorably to treatment for cancer of the cervix than do younger women, two physicians of the Mayo Clinic, Rochester, Minn., have found in a study made of 3,798 patients at the clinic from 1915 through 1944.

Writing in the July 10 issue of *The Journal of the American Medical Association*, the physicians —Harry H. Bowing and Robert E. Fricke—say that "the patient more than 49 years of age has a definitely favorable factor influencing the five year cure rate."

Women 49 or older responded better to all types of treatment, except that younger women were more able to withstand the effects of surgery.

Twenty-nine per cent of the women between the ages of 30 and 49 who were treated before 1940 and who were traced by the physicians were living five or more years after leaving the hospital. In the 40 to 69 group, nearly 37 per cent were living five or more years after leaving the hospital.

The majority of patients with cancer of the cervix are in the menopausal years of their lives, the study shows. About two thirds of the entire group were from 40 to 59 years of age and only a few patients were under 30 or over 69.

The importance of early treatment, systematic examination after treatment, individualized therapy, and the harmful effects of treatment by inadequate methods were also emphasized in the study.

Seven types of treatment were used, the type being determined by the stage of the disease, the patient's condition and previous treatment, and other factors:

(1) Radium therapy, (2) Roentgen therapy, (3) Surgery, (4) Surgery, radium therapy, and roentgen therapy, (5) Combined radium therapy and roentgen therapy, (6) Surgery and radium therapy, and (7) Surgery and roentgen therapy.

Combined methods are often more successful than any method used alone, the study points out.

The importance of early treatment is shown by the fact that among the patients at the clinic from 1915 through 1939, 65 per cent of those treated in an early stage of the disease and who were traced by the physicians were living five years after leaving the clinic.

Emphasizing the importance of systematic examination after treatment, the physicians say:

"The importance of a well-planned follow up system cannot be overstressed. We recommend re-examination every three or four months for the first post-treatment year; every six months for the second post-treatment year; and every year thereafter."

Stressing the adaptation of therapy to the needs of the individual patients, the physicians comment:

"It seems reasonable that by a combination of selected methods in proper sequence the most good can be obtained for the patient. So far, there are no mass production procedures that will effectively control the malignant disease."

## MEDICINE AND SURGERY BRING FEW CURES IN ULCERATIVE COLITIS

Following an intensive study of 100 carefully selected patients suffering from ulcerative colitis, four Chicago doctors concluded that both medical and surgical treatment bring about few specific cures.

Writing in the July 10 issue of *The Journal of the American Medical Association*, the doctors—Joseph B. Kirsner, Walter Lincoln Palmer, S. N. Maimon, and W. E. Ricketts—said that "it is apparent from this study that the number of 'cures' is small; in the 100 cases there are only six which we were willing to so designate."

Colitis is an inflammation of the colon. Symptoms of ulcerative colitis, termed a chronic disease, usually consist of diarrhea, cramping abdominal distress, fever, and weakness. Profuse bleeding may occur.

"Complete and lasting cure following medical management is rare. After medical management alone, it has been possible to maintain 47 per cent of the patients in a 'satisfactory' state of health; 19 per cent, though not markedly improved, are, on the other hand, not significantly incapacitated," the article says, adding:

"In spite of the emphasis on the severity of

the disease, ulcerative colitis may exist for many years without significant disability and with rather minor symptoms."

The doctors found that in many cases the disease attacks the colon with greatest intensity early in the period of illness and that mortality is highest during the first one or two years.

"The cause of ulcerative colitis remains obscure. No specific organism has been established conclusively. There is no convincing evidence that the disease is psychogenic in origin. Nevertheless, it would appear from the frequent coincidence of emotional disturbance and the recurrences of symptoms that some relationship does exist."

Eighteen patients were interviewed by psychiatrists and 16 by a physician investigating the psychosomatic aspects of ulcerative colitis. Significant emotional problems were detected in 32 of the 34. Among the remaining cases, definite emotional disturbances were found in 15 and lesser degrees of emotional tension in 20.

"The patients were described by the psychiatrists as immature, dependent, and overtly passive. Anxiety states, insecurity, hostility, sexual maladjustments, and schizoid tendencies were commonly observed. There was a tendency for the symptoms to recur or to become accentuated during the development of situations requiring responsible and decisive action."

Eighty-one patients were treated medically throughout their illness and 19 patients were treated surgically. Twenty-five of the first group and three of the second showed marked improvement.

The study shows that persons between the ages of 10 and 40 years are most often affected, but that the disease may occur at any age.

Of the 100 patients, 14 died. The mortality rate was highest among young patients. Six of the deaths occurred in patients less than 25 years old and four patients under 20.

"The effect of more modern methods of therapy (nutritional, antibiotic, psychiatric) on the course of the disease remains to be ascertained," the writers comment.

## X-RAYS FOUND EFFECTIVE IN DISEASE OF LYMPH GLANDS

X-rays have been found very helpful in the treatment of a comparatively newly described disease of the lymph glands, according to Dr. Sidney Rubenfeld, of the Department of Radiation Therapy, Bellevue Hospital, New York.

Writing in the July 3 issue of *The Journal of the American Medical Association*, Dr. Rubenfeld reports a fairly high percentage of treated patients who have survived five years or more.

The lymph gland disease which The Journal article describes is known medically as giant follicular lymphadenopathy or Brill-Symmers disease, named after Nathan E. Brill, a New York physician who died in 1925, and Douglas Symmers, a New York pathologist.

The disease is characterized by enlargement of the lymph nodes in various parts of the body and enlargement of the spleen, these enlargements being due to the abnormal multiplication of normal cells within the lymph nodes. These nodes are tiny organs scattered in many parts of the body, especially in the neck, armpits, around the roots of the lungs, around the intestines and in the groins.

This disease, the article says, has been "widely recognized by pathologists but is only beginning to attract the attention of clinicians, among whom it is almost always mistaken for Hodgkin's disease. Both are primarily diseases of the lymphoid system."

Dr. Rubenfeld's paper was based on a study of 19 patients with giant follicular lymphadenopathy or with polymorphous cell sarcoma, which is a highly malignant tumor containing cells of several varieties. The oldest patient was 59, the youngest 12. There were five females and 14 males. Enlarged lymph nodes constituted the outstanding clinical feature.

X-rays were used in the treatment of all 19 patients.

"In addition to the difference in the degree of response there were variations in the rapidity of the recession," the doctor pointed out.

Sixty-six per cent of patients with giant follicular lymphadenopathy and 60 per cent of those with polymorphous cell sarcoma are apparently well five or more years after the institution of treatment, the article says.

Heretofore, five year survival rates for diseases of this kind were quoted in the medical literature at only 47 to 50 per cent.

## THE WORK OF DR. WALTER REED

*Talk delivered by Brigadier General George E. Armstrong, Deputy Surgeon General, U. S. Army, at the Hall of Fame, New York University, New York, on 20 May 1948, at the Ceremony of the Unveiling of a Bust of Dr. Walter Reed.*

The entire Medical Department of the Army is here in spirit today to witness this signal recognition of Dr. Walter Reed. Placement in the Hall of Fame represents the pinnacle of honor for this great son of the Army. Although with pardonable pride I refer to him as the Army's own he also belongs to the State of Virginia; to the University of Virginia; to New York University; to the practitioners of curative medicine; to the fast-fading group of "horse-and-buggy doctors;" to the men of medical research:—in fact, he belongs to the Nation. Walter Reed was a modest and reticent man. I think he would look upon this great occasion with wonder that the Nation and medical science should choose thus to honor him—almost 50 years after he, in his work on yellow fever, had done what he considered to be nothing more than his duty. Simplicity, sincerity, and purposeful ideals, however, are a part of all great men. For Walter Reed, who was so

well endowed with these qualities, today's expression of gratitude by the Nation is richly deserved.

You will hear from other speakers much of the story of the life and work of Walter Reed. He would be proud that his work has stimulated so much effort toward searching out the mysteries of disease and in developing the broad preventive medical knowledge that now allows us to traverse the globe with comparative freedom from communicable diseases. Let us briefly enumerate some of the contributions of his Army contemporaries and of those who have followed.

It is necessary only to note the names of these men and to associate them with the problems on which they worked. Their findings have materially influenced the growth of preventive medicine in the Army and the practice of public health and tropical medicine throughout the world. I refer particularly to the work of Craig on amoebic dysentery and the parasitic diseases. He has been a great teacher of medicine, and together his researches and teachings have been a fine contribution to American medicine. There was the work of Vedder on beri-beri and of Russell on typhoid. One of the greatest of these contributors has been Dr. Richard P. Strong, who began his career in the Army and served his country in uniform in the Philippines and in two world wars. His place of eminence in the medical world is recognized by all of us. There followed the studies of Siler and Simmons on dengue fever, and those of Callender on the dysenteries. Most of these men spent much of their time in the Army Medical School, to the development of which Walter Reed gave so much. There have been many others but time does not permit us to record them. The clear influence of Walter Reed's approach to science and medical investigation is apparent in all of them. His concepts and teachings have been carried on through a series of brilliant directors of the School and their associates. The men who directed our preventive medicine and research programs in two world wars spent much of their career in the School. The success of their efforts is written in the magnificent health record of our Army, the like of which had never been recorded in military history prior to World War I and which was improved upon in World War II.

The global scope of World War II required that we consider all phases of medical problems from the Arctic to the Tropics. Such broad responsibilities could only be met by the mobilization of all medical research resources throughout the Nation. This necessitated the integration of the best efforts of military and civilian medicine alike. Walter Reed had set a precedent in this also in his contact with Dr. Welch and his associates, with the prominent men of medicine in other medical centers, and by his cooperation with Cuban scientists and clinicians.

It may be of interest to review rapidly some of the developments in World War II that would have been of greatest interest to Walter Reed. I refer particularly to the perfection of the vaccine against yellow fever which was so ably worked out by the Rockefeller Foundation and the U. S. Public Health Service and applied to the protection of health of American personnel during the war. American soldiers were protected from tetanus by a vaccine. Typhus vaccine, together with DDT, gave us the means for the first time for the control of that scourge of war and famine, epidemic typhus fever. The development of synthetic drugs for the suppressive and clinical treatment of malaria has been a momentous contribution. It is impossible at this time to predict their influence, together with that of DDT, upon the world malaria problem. Their use made possible our operations in the Pacific and our successes against the enemy. The improvement of the chemical purification of water and the development and application of the diatomaceous earth filter would have been of extreme interest to Walter Reed because of his work on typhoid fever and his interest in intestinal diseases. We need only mention the antibiotics, the vast use of whole blood, blood derivatives and substitutes, and the advances in the control and therapy of tropical diseases in general.

As we contemplate the present world situation and think of the technicological developments in weapons, the challenge to medical progress is formidable. We must look toward preparedness for the defense of our country while at the same time bending every effort toward the consummation of a peace that will bring with it the opportunity for international health and well-being. American medicine can contribute greatly to the former, and must take its place of leadership in matters of health. To accomplish these we shall have to call upon all of our resources in medical science, not the least of which is the heritage of scientific integrity left to us by men like Walter Reed.

The placing of a lifelike bronze image of Walter Reed here among those of his countrymen, famous because of their great accomplishments in other fields, will preserve his memory for the American people. His contributions to science and his glorious example will be perpetuated in the continued efforts of the men and women of the Army Medical Department.

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## GRADUATE COURSES

The Post-Graduate Committee of the Medical Association of Georgia plans to hold two seminars during the year, one at Emory and one at Georgia. Note next month's JOURNAL for details regarding dates, subjects, etc., a program designed particularly for the general practitioner.

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

### LEGISLATION FOR PREMARITAL BLOOD TESTS: THE CASE FOR AND AGAINST

ALBERT HEYMAN, M.D.
*Atlanta*

In the next session of the Georgia State Legislature renewed efforts will be made by various civic groups and social hygiene organizations to pass a law requiring blood tests for syphilis of all persons applying for a marriage license. Although this type of legislation is now in effect in 38 states throughout the country, there is still considerable misunderstanding and doubt regarding its value.

The chief purpose of premarital blood test laws is to find cases of syphilis before marriage and to prevent spread of the infection to the marital partner and to the unborn children. This is undoubtedly a valid argument. While it is true that many couples have intercourse prior to marriage and the spread of the disease cannot be wholly prevented by premarital serologic tests, this procedure will offer some protection to the majority of marital partners.

The number of individuals who will be protected against syphilis by this type of legislation cannot be estimated with certainty. Mass blood testing in Georgia has revealed that approximately 10 per cent of the total population has syphilis. It seems reasonable, therefore, to assume that at least 2 or 3 per cent of applicants for marriage licenses are infected with the disease. Not all of these individuals, however, will have the disease in the infectious state. Syphilis is most infectious in the first year after it has been acquired. The danger of transmitting the disease diminishes steadily with each succeeding year and by the end of the fifth year the risk is extremely slight. Since applicants for marriage are usually young individuals who have had the disease for a short period of time, the probability of their transmitting the infection is likely.

Those opposed to this type of legislation state that the tests are often negative in one of the most infectious stages of the disease: the incubation period and the early primary stage. This is unfortunately true and in many states a physical examination is required along with the serologic test in an effort to detect the primary stage of the disease. The diagnosis of syphilis in its incubation period is, of course, not possible by physical examination, nor can individuals with inadequately treated early syphilis and negative blood tests be detected. Such cases may develop infectious relapse after marriage and thus infect the marital partner. The detection of these two types of patients constitutes definite limitations to the premarital test, but fortunately they make up a very small percentage of the persons tested, and are not formidable arguments against the value of premarital blood test legislation.

The prevention of congenital syphilis is another important aim of this law. Dr. Nels Nelson, the venereal disease control officer of Baltimore, states that this is a most fallacious argument, since prenatal blood tests and adequate antisyphilitic treatment of the pregnant woman are the only ways to prevent congenital syphilis. Prenatal blood tests, however, are not always obtained and are often taken too late in pregnancy to prevent infection of the fetus. Furthermore, treatment is not invariably effective in preventing congenital infection. For these reasons, it is far more desirable to prevent congenital syphilis by attempting to protect the mother against the disease. This is the purpose of premarital blood test legislation.

In addition to its value in protecting the marital partner, premarital blood test legislation is also advocated as a case-finding measure. Many individuals with syphilis have no history of having had any of the early manifestations of the disease and often show no clinical signs of the infection. It has been estimated that probably 20 per cent of the men and 30 per cent of the women acquire the disease without having definite lesions of early syphilis. These individuals are a public health menace and, since they are unrecognizable as syphilitics either to themselves or to others, they not only spread the disease to the community but if left untreated will also develop serious or fatal late manifestations. There is no method of approaching this problem except by widespread serologic tests.

Opponents of such laws state that there is no justification for subjecting only a part of the general population to compulsory blood tests as a case-finding procedure. Actually a great many portions of the population are already subjected to either compulsory or voluntary tests for syphilis. Individuals seeking employment in many industries, as well as those entering the armed services and many schools and colleges, are required to take serologic tests for syphilis. Most physicians and hospitals now take routine serologic tests on all patients, regardless of complaints or types of illness. A large segment of the population is also subjected to serologic tests as blood donors. Routine blood testing of all adults in Alabama is required by law, while in Georgia and many other states mass blood-testing surveys have been going on for some time. Indeed, in Georgia the passage of a law requiring

From the Clinic for Genitoinfectious Diseases, Grady Memorial Hospital, Emory University School of Medicine, and the Georgia Department of Public Health.

premarital blood tests would be only a very small part of a much larger mass blood-testing program.

Premarital blood tests are also advocated as a means of educating the public about syphilis. The requirement of a routine premarital serologic test cannot fail to stimulate public interest in syphilis: how it is acquired, its treatment and manifestations. This widespread interest in the disease may contribute in some part to reducing its spread, since greater knowledge of its methods of transmission may lead to protection against the infection.

Opponents of this type of legislation state that such laws that are already in effect produce more misconceptions than valid information. The law requiring that foodhandlers, barbers, beauticians, etc., have routine pre-employment serologic tests has given rise to false impressions that the disease is usually spread by non-sexual contacts. These misconceptions are not the result of the law itself, but exist because the medical profession and the health departments permit them to remain unchallenged.

The greatest objection to the passage of premarital blood test laws is that the serologic tests for syphilis are sometimes positive in non-syphilitic individuals. Such false positive reactions are of two main types: those caused by technical errors and those of a biologic nature. Even when performed by those most competent (the originators of the tests themselves), technical false positive reactions will occur in 0.2 to 1 per cent of known non-syphilitic persons. The incidence of technical false positive reactions will be considerably greater in less competent hands. Many laboratories report as high as 10 per cent technical false positive results. It becomes extremely important, therefore, that the laboratories performing premarital blood tests be approved by the State Health Department. This would, of course, raise the standards of laboratory performance throughout the State, a very desirable feature.

The second type of false positive reactions, those of a biologic nature, offer a considerably greater problem. There is evidence to suggest that a very small but definite proportion of perfectly normal individuals may show either permanently or transiently positive serologic reactions. In addition, a large number of illnesses, such as upper respiratory infections, vaccinia, infectious mononucleosis, and many other febrile diseases will produce false positive serologic reactions. Although the majority of such reactions can usually be detected by modern serologic procedures, many marriages will be delayed and unnecessary alarm and unhappiness will occur.

Another valid objection to premarital blood test legislation is that the tests do not indicate the infectiousness or non-infectiousness of the disease. Many patients maintain positive serologic tests despite adequate treatment. They cannot transmit the infection to their marital partners. To forbid these individuals to marry merely on the basis of a positive serologic reaction is unjust. Unfortunately, the determination of the infectiousness of a given individual often baffles the expert syphilologist, and is a problem which the general practitioner is not capable of deciding in many instances. Since the modern treatment of syphilis with penicillin has become rapid and non-toxic, it would seem advisable to treat such marriage applicants wherever there is any doubt as to whether the disease may become communicable. The majority of such patients would probably desire therapy rather than risk infecting their marital partner. Should the physician be undecided as to the infectiousness of the case or the patient not willing to undergo further therapy, the opinion of an expert should be sought. Free consultation facilities should be made available by the State Health Department.

Another objection to this law is that the tests may discourage marriages in the group of patients having the highest incidences of syphilis and may result in sexual promiscuity, common law marriages, illegitimacy and even greater spread of the disease.

It must be admitted that the chief insistence for the passage of this type of law comes not from the medical profession or health departments, but rather from the public itself. Indeed, many of the medical societies and public health officers have been opposed to such laws, but go along with the demands of various civic groups. A number of states have attempted a more broadly eugenic program and forbid marriage of individuals known to be alcoholic, feebleminded, epileptic, addicted to drugs, or to be suffering from tuberculosis. Some of these provisions, particularly that requiring examination for active tuberculosis, would seem to be desirable and should probably be incorporated in the local legislation. It must be emphasized that many of the shortcomings of these laws can be avoided by careful attention to such provisions as interstate reciprocity, simplicity of forms and protection against publicity of the infected individual.

In summary, it may be said that premarital blood test laws are not without limitations and do not completely prevent the spread of the disease. Nevertheless, they are often of value. Whether the expense, disadvantages and inconvenience of such law are warranted in an effort to prevent the spread of a relatively small number of cases of syphilis is the problem the people of Georgia must decide.

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*The* Journal *would like to record the scientific work of Georgia physicians. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

## COMMUNICATION

Dr. Edgar H. Greene, President,
Medical Association of Georgia.
Doctors' Building,
Atlanta, Georgia

Dear Dr. Greene:

Several months ago, it was our pleasure to invite Dr. Steve P. Kenyon, President, Medical Association of Georgia to the opening of the Atlanta Regional Blood Center. After four months of operation we would like to share with you, the new President Medical Association of Georgia, the degree of success we have enjoyed in the evolvement of this program since members of your group through their support are directly responsible for this success.

During the first four months more than 5,000 pints of blood have been collected and processed through the Center. The blood has been distributed in the cooperating counties and to hospitals in the Atlanta area, including Army General and Veterans Administration Hospitals. In addition, emergency requests from hospitals in all parts of the state have been met. We believe this is a good start and each week more people are volunteering to donate blood. Twenty of the forty-three counties within a 75 mile radius of Atlanta are cooperating and have been supplying blood through visits of the Mobile Unit operating out of the Atlanta Center. Other counties in this area will be reached as soon as chapter surveys are completed, approvals are received from County Medical Societies and recruitment plans are developed.

Blood is essential to life. The emergency blood needs of the country are not being met. Therefore, it is imperative that the Red Cross Blood Program be developed as rapidly as possible. Experience in more than 200 communities in which this program is now operating has revealed that people will unhesitatingly give their blood to save lives. The response is enthusiastic because we can assure these donors that their blood will not be sold. To assure the rapid development of this program it will be necessary to have the cooperation of all groups in making the emergency blood needs known and that consistent with Red Cross philosophy in all of its services, no charge will be made for this blood.

We wish it could be said at this time that all blood needs were being met. However, as each week goes by, more blood is being supplied and if we continue to have the ever increasing support of groups like yours, and as more people realize that giving blood is not an unpleasant experience, within a year you can be assured that the blood needs of the Atlanta Blood Center Area will be met.

Kindly express our appreciation to members of your group for their support of this program and impress upon them the continued need for blood donors.

Sincerely,
JAMES M. JONES,
State Relations Officer.

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## NEWS ITEMS

Dr. H. L. Barker, Carrollton, outstanding in Lions' Club work for many years, was endorsed for a directorship in Lions International by members throughout the State attending the Georgia convention at Savannah, July 13-16. Lions International includes 22 democratic countries, and directors who were elected at the International Convention held in New York City, July 26-29. Dr. Barker is a charter member of the Carrollton Lions Club and has held practically every office, including the presidency. For a number of years he served as secretary-treasurer. He has a 10-year perfect attendance record and holds the coveted Master and Senior Keys. He has attended 15 of 16 state conventions since his club was organized and every International Convention since 1938, serving one year as vice-chairman of the Board of Governors. In addition, he has served the State as Zone Chairman, Deputy District Governor and Governor of 18-A, and was awarded a trophy for outstanding services while District Governor.

Dr. Joseph L. Berg, Albany, announces the opening of offices at 305 North Jefferson Street, Albany. Practice limited to ophthalmology.

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Dr. James L. Campbell, Jr., formerly of Atlanta, announces the opening of his office at 103 West Brookwood Drive, Valdosta, for the practice of urology.

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Dr. Joseph R. Carver and Dr. Russell L. Counts, Dalton, announce the opening of their offices at 202 West King Street, Dalton, for the general practice of medicine and surgery. Dr. Carver is a graduate of the University of Georgia School of Medicine, Augusta. He received his hospital training at Emory University Hospital, Atlanta, and at the Baroness Erlanger Hospital, Chattanooga. Dr. Carver is a member of the Sigma Chi social fraternity, Alpha Kappa Kappa medical fraternity, Alpha Omega Alpha honorary medical fraternity, the Whitfield County Medical Society, the Medical Association of Georgia, and is a fellow of the American Medical Association. Dr. Counts graduated from the University of Georgia School of Medicine, Augusta. His hospital training was received at Georgia Baptist Hospital, Atlanta, and the Baroness Erlanger Hospital, Chattanooga. Dr. Counts is a member of Alpha Sigma Delta honorary pre-medical fraternity, Phi Chi medical fraternity and the Tennessee State Society of Anesthesiologists.

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Dr. Hartwell Boyd, Atlanta, announces that Dr. W. Vernon Skiles is now associated with him in the practice of gynecology and obstetrics, with offices at 56 Fifth Street, N. E., Atlanta.

* *

The Chattooga County Medical Society held its monthly meeting at John's Place, Summerville, June 8. The meeting was opened with the invocation given by Dr. R. N. Little. During the business meeting the society decided to hold meetings regularly on the first Tuesday of each month. Dr. G. H. Little was host to the members of the society. Two scientific papers were read and discussed prior to the round-table discussion of recent advances in medicine. Officers elected were: Dr. W. U. Hyden, Trion, president; Dr. H. P. Holbrook, Summerville, vice-president; Dr. William T. Gist, Summerville, secretary-treasurer; Dr. J. J. Allen, Summerville, delegate to the Seventh District Medical Society. The society passed a resolution declaring Dr. W. B. Hair, Summerville, an honorary life member of the Chattooga County Medical Society, and honoring him for his "many years of unselfish service to suffering humanity."

* * *

Dr. Clarence G. Cox, formerly of Milledgeville, has been named chief of the mental division of the new multimillion dollar Veterans' Hospital, Dublin. Dr. Cox is a native of Ellijay, and is a graduate of the University of Georgia School of Medicine, Augusta. He has had some twenty years experience on the staff of the State Hospital, Milledgeville, before transferring to the Veterans Administration office at Macon some time ago. His friends will be glad of his recognition as a psychiatrist and of his promotion.

* * *

Dr. Hal M. Davison, Atlanta physician and native Georgian, was elected president of the American Therapeutic Society at the annual meeting in Chicago, held in conjunction with the annual session of the American Medical Association June 21-25. The society is composed of doctors specializing in the study of the treatment side of medicine. Dr. Davison, former president of the American College of Allergists and Chief of Medicine at Georgia Baptist Hospital, has practiced medicine in Atlanta since 1922. He is a member of the Board of Trustees of the Fulton County Medical Society.

A native of Woodville, Dr. Davison graduated from Mercer University and from the old Atlanta Medical College, now Emory University School of Medicine, in 1915. Following internship and residence work at the New York Postgraduate Hospital, he entered World War

I as a lieutenant in the Army Medical Corps. He served with the Army in Vladivostok, Siberia, and remained in Russia with the Red Cross when World War I ended. He helped establish several Red Cross hospitals in Siberia and was commissioned by President Herbert Hoover to direct operations of the "Russian Children's Boat" which evacuated displaced children from Siberia to all parts of Europe. Dr. Davison married the former Miss Natalia A. Beklemisheva in Russia. On his return to the United States, in 1921, he did postgraduate work at Cornell University before settling in Atlanta.

* * *

Dr. Charlotte Donlan, Savannah, head of the Savannah Tumor Clinic, recently addressed the members of the Pilot Club at their meeting at the Hotel DeSoto, stating that "Cancer is the most curable of all chronic diseases." Dr. Donlan said that the development of an open mind toward the disease and the seeking of medical aid as soon as it is detected is urgently needed. Her talk was given in connection with the showing of the moving picture, "The Battle Against Cancer."

* * *

Dr. John Thomas DuPree, Gordon physician, has accepted the surgical residency at Georgia Baptist Hospital, Atlanta, where he will serve from one to three years. He graduated from the University of Georgia School of Medicine, Augusta, in 1944, and interned at Baroness Erlanger Hospital, Chattanooga. During World War II he served 13 months in the U. S. Navy on destroyers. Since 1946 Dr. DuPree has been associated with his father, Dr. George W. DuPree, DuPree Clinic, Gordon.

* * *

Dr. Charles S. Floyd, Loganville, was recently named a member of the State Democratic Executive Committee. Dr. Floyd, one of Walton County's leading citizens and physicians, has long been a Talmadge stalwart and enthusiastically supported the elder Talmadge in all his campaigns.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, July 15. Scientific program: "Skin Problems in Everyday Practice", Dr. Hugh Hailey, moderator. "Eruptions of the Hands and Feet", Dr. Joseph L. Rankin; "Drug Eruptions", Dr. Wm. L. Dobes; "Tumors", Dr. Philip H. Nippert; and "Suggestions in Treatment", Dr. Herbert Alden.

* * *

Dr. J. Howard Hagan, Rockmart physician, was recently notified that he has been accepted as a junior fellow in the Southeastern Surgical Congress. Dr. Hagan, a native of Rockmart, has operated a clinic at Rockmart since his release from the U. S. Army.

* * *

Dr. B. S. Hardman, a native of Gainesville, announces the opening of his offices in the Plowden Building, Green Street, Gainesville, for the practice of medicine. Dr. Hardman graduated from the University of Georgia School of Medicine, Augusta, in 1943. He is a member of the Alpha Omega Alpha honorary medical society, and the Phi Chi medical fraternity. He completed nine months' internship in anesthesiology at the University Hospital, Augusta, and then went through a rotating internship at the U. S. Marine Hospital, Norfolk, Va. He served two years in the Army Air Force hospitals. Upon his discharge, Dr. Hardman accepted a 12 months' fellowship in obstetrics, gynecology and pharmacology at the University of Georgia School of Medicine, Augusta, and since then has been associated with Dr. Richard Torpin in the department of obstetrics and gynecology, also in Augusta.

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Dr. A. Worth Hobby, Atlanta, read a paper entitled "Liposarcoma with Unusual Findings" before the American College of Chest Physicians at their meeting in Chicago, July 19.

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Dr. C. Richard King, Atlanta, announces the opening of his office in suite 814 Doctors Building, 478 Peachtree Street, N. E., Atlanta. Practice limited to thoracic surgery and bronchoscopy. Dr. King graduated from the University of Tennessee College of Medicine, Memphis, in 1936. He interned at John Gaston Hospital, Memphis, 1936-38; served as resident physician at Western Oklahoma State Sanitarium, Clinton, Okla., 1938-40; residency in surgery at John Gaston Hospital, Memphis, 1941-42, with 1 year on chest service; in the U. S. Army for three and half years, Auxiliary Surgical Group and Kennedy General Chest Center, Memphis; and held a fellowship in pathology at Tulane University of Louisiana School of Medicine, New Orleans, for six months. Finally, he held a fellowship at Ochsner Clinic, New Orleans, in surgery during 1947.

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Dr. Hubert U. King, a native of Augusta, announces his association with Dr. Joseph Martin Echols, Community Club Clinic, Nicholls, in the practice of general medicine. Dr. King and Dr. Echols both are graduates of the University of Georgia School of Medicine, Augusta.

* * *

Dr. S. C. Lynn, Savannah physician and Korean native, recently left for London, England, where he will serve as team physician for the 70-man squad of Korea on the International Olympic games for the first half of August. This is the first time the Koreans have participated in the Olympics for their own country. Previously they had been entered under the Japanese banner. It will be the first time in 27 years that Dr. Lynn has seen his 76-year-old father and other relatives since he left his native land at the age of 16. While in London he anticipates getting in some study and research in chest work. Dr. Lynn is a graduate of Emory University School of Medicine, Atlanta. He served his internship at Quincy, Mass., and was resident physician at Norfolk County Tuberculosis Hospital, South Braintree, Mass., for two years prior to locating in Savannah about Christmas 1938. He expects to return to Savannah to resume his practice in chest work the latter part of September.

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Macon Hospital, Macon, announces the first women interns there recently assumed their duties. They are Drs. Sophia A. Joffee and Patricia Jordan of Chicago, and M. E. Chen of Shanghai, China. The three women are among the nine interns who have joined the staff, bringing the strength of intern and resident physicians to 18, the largest in the history of the hospital according to Dr. C. L. Ridley, superintendent. The six male interns who have reported for duty are Drs. James C. Collier, James J. DeVito, Jerome Gerber, Alex Newman, Daniel A. Osman and William Stromberg. The intern staff for next year will be headed by Dr. William E. Lewis as resident for surgery; Dr. Eugene Flowers, resident for obstetrics and gynecology, and Dr. William G. Sams, resident for medicine. Assistant residents for surgery will be Dr. Ralph D. Roberts, Gray; Dr. Lee Williams, Jr., Cordele; and Dr. John H. Moorman, Jr., Richmond. Dr. Frank J. Primich, Weshanken, N. J., will be assistant resident for obstetrics and gynecology, while Dr. Henry K. Jarrett, Macon, will join the staff as assistant resident of medicine. Dr. William M. Orr will remain as assistant resident of pediatrics.

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Dr. Clarence W. Mills, Atlanta, announces the opening of offices for the practice of internal medicine, special attention to diseases of the chest, at 663 West Peachtree Street, N. E., Atlanta.

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Dr. J. Phillip Muse, a native of Savannah and recently of Charleston, S. C., announces the opening of offices in the Gordon Building, Brunswick. Practice limited to pediatrics. Dr. Muse is a graduate of Duke University School of Medicine, Durham, N. C., in 1941. In 1941-42 he served rotating internship at Grace Hospital, Detroit, Mich., and 1942-46 was flight surgeon, U. S. Army Air Corps, serving two and half years in the China-Burma-India theater of war. From 1946 to 1948, Dr. Muse served two years residency in pediatrics at Roper Hospital, Charleston, S. C., and was affiliated with the Medical College of the State of South Carolina.

Dr. D. L. Nix, Lakeland, is at St. Augustine, Florida, where he is beginning a course in surgery. He expects to complete the course in about six weeks. He will return to Lakeland each Friday to see his patients during each week-end while taking the surgical course.

* * *

Dr. Rufus F. Payne, Rome, superintendent of the Battey State Hospital, recently made the principal address of the day at the third day session of the teacher course in tuberculosis which was conducted daily at the Georgia State College under the sponsorship of the Georgia Health and Tuberculosis Association at Savannah for five days. The Chatham-Savannah Tuberculosis and Health Association cooperated with the program. The Savannah School is one of five Negro colleges in Georgia to offer such a summer school workshop or health course for teachers. Dr. Payne discussed admission policies and the treatment of tuberculosis. He also touched upon the recreation and rehabilitation aspects of patients. Dr. H. C. Schenck, Atlanta, director, Division of Tuberculosis Control, Georgia Department of Public Health, delivered the principal address on the fourth day of the session. Dr. Schenck enumerated facts concerning the cause of tuberculosis, its spread, and gave information pertaining to the manner in which the patient is affected by the disease. He also discussed the methods of finding and diagnosing cases, and the steps to be taken in the prevention of the disease.

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Dr. David Quinn, formerly of Seattle, Wash., is permanent manager of the Veterans' Administration Hospital, Dublin. The announcement was made by Dr. H. B. Cupp, acting manager, who is assistant branch manager medical director in Atlanta. Dr. Jack Thurston, Atlanta, of U. S. Veterans Hospital 48 has been named chief of surgery. Dr. Glenn Mullens, formerly of Bay Pines, Fla., is chief of medical service. Dr. Cecil Mathis, chief dental officer, is from Kennedy Hospital, Memphis, Tenn. Thomas B. May is executive officer. U. S. Naval officials formally turned over the giant facility to Veterans' Administration authorities in ceremonies June 30, prior to active operation by the Veterans' Administration on July 1.

* * *

Dr. Harry Evan Rollings and Dr. Ellison Richards Cook, III, Savannah, announce the opening of their offices for the practice of internal medicine at 513 Whitaker Street, Savannah. Dr. Rollins is a graduate of Tulane University of Louisiana School of Medicine, New Orleans, and has completed three years as resident physician in medicine at Charity Hospital, New Orleans, as well as his internship at the General Hospital, Philadelphia. He has been on the staff of the Ochsner Clinic and has instructed in the Tulane University of Louisiana School of Medicine, both of New Orleans. Dr. Cook is a native of Newnan and is a graduate of Emory University School of Medicine, Atlanta. He interned and was resident physician at Charity Hospital and has taught at the Tulane University of Louisiana School of Medicine, all of New Orleans.

* * *

Dr. Tully T. Blalock, Atlanta, recently returned from a trip to Chicago where he received his certification by the American Board of Internal Medicine.

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The Georgia Baptist Hospital medical staff dinner meeting was held in the Nurses' Home dining room, Atlanta, June 30. Dr. Lester Brown, Atlanta, chairman of the Clinico-Pathological Committee, planned the program. "Carcinoma of the Gallbladder Following Recurrent Inflammation and Gallstones" was discussed. Dr. Wm. G. Hamm, Atlanta, secretary medical staff.

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Dr. Hayward S. Phillips, Atlanta, recently completed the examinations and has been certified as a fellow of the American College of Anesthesiology. Dr. Phillips attended the annual session of the American Medical Association while in Chicago, after qualifying for his specialty board.

Dr. E. C. Settle, Toccoa, recently resigned as Health Commissioner of the Tri-County District because of ill health. No one has been named to take his place.

* * *

Dr. Edwin C. Shepherd, Savannah, was recently appointed by the Chatham County Board of Health as deputy commissioner of health for Chatham county to assist Dr. Clair A. Henderson, city and county health officer, with county work. Dr. Shepherd graduated from the University of Georgia School of Medicine, Augusta, and subsequently did health work in Tennessee.

* * *

Dr. M. Sundaram, Pravancore State, India, and Dr. P. H. Chen and Dr. Charles Chen, both of China, have been studying the administrative procedure of the Regional Health Office and clinical work with the City-County Health Department, Macon. The three Far Eastern doctors observed procedure at the maternal child hygiene clinic of the Macon-Bibb County Health Department. Having studied in several states, the doctors are in Georgia because of the particular administrative functions of the State and county health departments. Upon completion of their tour of this country, the Chinese doctors will return to their homes to do public health work. The Indian is in America on a Rockefeller Foundation grant.

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The University of Georgia School of Medicine, Augusta, will receive the sum of $170,000 to be added to its operating allotment, according to Governor M. E. Thompson. Chancellor Raymond Paty asked for the money to provide additional clinical services at the University Hospital and to care for indigent patients from outside Richmond County, where the medical school and hospital are located. Dr. Paty told the Governor that the additional money would enable the school to increase its enrollment of new students from 76 to 82.

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Dr. Lloyd F. Timberlake, Atlanta, announces the opening of offices for practice of internal medicine at 35 Fourth Street, N. E., Atlanta.

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Dr. Herbert Daniel Tyler, Thomaston, announces the opening of offices for the practice of internal medicine, 308½ South Center Street, Thomaston. Dr. Tyler graduated from Emory University School of Medicine, Atlanta, in 1940. He interned at Piedmont, Grady, and Lawson VA hospitals.

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The United States Marine Hospital, Savannah, has been assigned five new doctors, two nurses and an administrative assistant to the staff, Dr. Lee C. Watkins, medical director of the hospital, recently announced. They include: Dr. Edward A. Rogers, Jr., commissioned in the regular corps of Public Health Service, from Anamosa, Iowa; Dr. Roland H. Corbet, transferred from U. S. Marine Hospital, Boston, Mass.; Dr. Robert A. Sammons, transferred from Industrial Hygiene Division, Washington; Dr. Philip D. Corn, commissioned in the regular corps from Bristol, Pa.; Dr. Everett C. Sutter, from the U. S. Marine Hospital, Staten Island; Nurse Officer Eva B. Hunter, transferred from Boston; Nurse Officer Angela L. Heffernan, and administrative assistant Arza E. Sheriff, both transferred from Staten Island.

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Dr. Robert L. Whipple, Jr., Atlanta, announces the association of Dr. Arthur B. Codington in the practice of internal medicine, 502 Medical Arts Building, Atlanta.

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Dr. T. Irvin Willingham, Atlanta, announces that Dr. Stacy W. Burnett is now associated with him in the practice of pediatrics, 56 Fifth Street, N. E., Atlanta.

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Dr. Charles E. Wills, Jr., Washington, returned recently from New York City, where he did his internship at St. Vincent's Hospital, and is associated with Drs. Simpson, Wills and Adair. Dr. Wills, Jr., graduated from the University of Georgia School of Medicine, Augusta, in 1947. He will work at the Washington General Hos-

pital, where his father, Dr. C. E. Wills, has done such notable service for the people of Washington and of Wilkes County.

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Mr. R. C. Coleman, Atlanta, secretary of the State Board of Medical Examiners, 111 State Capitol, announces that a new edition of the register of physicians licensed in Georgia will be published for 1948 of all physicians furnishing the information in a form letter being mailed. A prompt reply will insure your name appearing in the register. This is important!

* * *

The Post-Graduate Committee of the Medical Association of Georgia plans to hold two seminars during the year, one at Emory and one at Georgia. Note next month's JOURNAL for details regarding dates, subjects, etc., a program designed particularly for the general practitioner.

## THE SOUTHERN MEDICAL ASSOCIATION MEETING, MIAMI, OCTOBER 25-28

The forty-second annual meeting of the Southern Medical Association will be held at Miami on October 25-28 with the Dade County Medical Association as sponsor.

At a meeting of the Executive Committee on July 24, Dinner Key was selected as general headquarters for the following: registration; all section meetings, scientific, technical and hobby exhibits; and motion pictures. Dinner Key (the former Pan American Air Depot) is ten minutes' ride from the general hotel headquarters and makes it possible to hold all of the above activities in one location. There is parking space for over a thousand automobiles around the main building.

The evening programs, which will include the General Public Session, the General Session and the President's Ball, will be held at the Municipal Auditorium. The auditorium is just off of Biscayne Boulevard and is only a short distance from the general hotel headquarters.

Hotel reservations will be handled by the Hotel Committee, Southern Medical Association Meeting, c/o City of Miami Convention Bureau, 320 N. E. Fifth Street, Miami 32, Florida. Since the meeting is being held earlier than usual, all requests for rooms should be made immediately.

There will be twenty-one section meetings, two general sessions, one conjoint meeting (American College of Chest Physicians, Southern Chapter) and the "Miami Day" General Clinical Sessions.

Plans should be made at once to attend the convention. It is hoped that many of the physicians will postpone their vacations for Miami and its environs in October.

## BOOKS

CHRISTOPHER'S MINOR SURGERY, by Frederick Christopher, M. D., Northwestern University Medical School, Chicago. 1058 pages 6″x9″, with 937 illustrations on 595 figures. $12.00. New (6th) edition. W. B. Saunders Company, Philadelphia and London.

* * *

SOLLMANN'S PHARMACOLOGY, by Torald Sollmann, M. D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Cleveland. 1132 pages, 7″x10″. New (7th) edition. Among the many important changes and additions for this new edition are the new discussions of the antibiotics, antimalarials, antithyroids and antihistamines. The uses and effects of clavacin, bacitracin, subtilin, and norardia (among many others) are described in detail, in such clear and authoritative fashion that the doctor can understand their signficance at a glance. As in previous editions, Dr. Sollman stresses clinical observations and by-passes speculations which are lacking in clinical evidence. For the sake of quick reference, material of unusual importance is set in larger type. $11.50. W. B. Saunders Company, Philadelphia and London.

* * *

CUTTING'S MANUAL OF CLINICAL THERAPEUTICS, by Windsor C. Cutting, M. D., Professor of Therapeutics, Stanford University School of Medicine, Stanford University-San Francisco. New (2nd) edition. Designed to fit conveniently into the physician's bag, this handy little manual is just what the doctor ordered. It is compact, yet it represents a virtual encyclopedia of today's prescriptions and dosage tables, covering practically every disease and non-surgical condition that the family physician is likely to encounter. Thousands of doctors everywhere are using this book as their constant working guide, to supplement their larger reference works on pharmacology. The material is entirely up-to-date in every way; it is thoroughly sound and scientific, undiluted by unaccepted methods. 712 pages, 4¼″ x 7¼″, illustrated. $5.00. W. B. Saunders Company, Philadelphia and London.

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BECKMAN'S TREATMENT IN GENERAL PRACTICE, by Harry Beckman, M. D., Professor of Pharmacology, Marquette University, Milwaukee, Wisconsin. 1129 pages, 6½″x9½″.

We do not believe that there is a more highly valued book in modern medical literature than this one by Dr. Beckman. The number of doctors who buy each succeeding edition is legion . . . and the reason, obviously, is because this book is kept so thoroughly up-to-date and because it responds so completely to every logical demand that may be placed on it. The new (6th) edition is more than a worthy successor of earlier editions. It contains 33 entirely new discussions and an additional 100 have been rewritten or revised. W. B. Saunders Company, Philadelphia and London. Price $11.50.

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GENERAL ENDOCRINOLOGY: by C. Donnell Turner, Ph.D., Associate Professor of Zoology at Northwestern University. New, 1st edition. 604 pages with 163 figures. Philadelphia and London: W. B. Saunders Company. 1948. Price $6.75.

## DON'T EAT PINK PORK

Raw or undercooked pork can bring trichinosis, a long, painful and sometimes fatal disease, the Educational Committee of the Illinois State Medical Society observes in a HEALTH TALK.

The disease is caused by a round worm known as the Trichinella spiralis. It is acquired by human beings by eating meat, usually pork, in which the larvae are established. The larvae are encased in a transparent capsule in which they have existed for long periods in the muscular tissue of the hog. When the pork is eaten, the capsule dissolves in the stomach. The larvae then bore into walls of the intestines where, in a period ranging from seven to fourteen days, they grow into mature worms. Within six weeks, each female then produces about 1,500 eggs which hatch out into larvae. These larvae enter the lymph spaces of the intestinal walls, thence the blood stream, eventually reaching the heart. From the heart they are distributed in the blood to the muscles. They bore in between the muscle fibers and then form again the characteristic capsule or cyst, where they may remain alive for many years.

In its early stage, when the larvae are digging into the intestinal walls, the disease is usually marked by stomach upsets, followed by muscular pain, twitching and weakness. If the number of worms swallowed is large, the symptoms will be more intense, with pain so severe that it is often difficult to move. In the next stage there may be also difficulty in breathing, chewing, swallowing or talking, depending on what muscles have been invaded. Other common symptoms are headache, chills and a general feeling of illness. Puffiness appears around the eyes and the throat is sore. Acute attacks last for a week or two until the wandering larvae be-

come encysted, with a large majority of cases ending in recovery. There is always high fever in the second stage, with an increase in the white cells of the blood. If the parasite invades the heart muscles, death may result. The third stage, that of encystment, may show anemia and skin eruptions, with a few cases of pneumonia. The fever becomes remittent.

An average of 1.5 per cent of all American hogs is believed to have trichinae and autopsy averages throughout the nation show that about 16 per cent of the population has been infected.

Unfortunately, little can be done medically to alleviate the condition. It may take months to clear up, depending on the ability of the body to withstand the activity of the parasite until it becomes encysted. The best treatment is prevention.

Because hogs acquire the infection from eating offal and garbage, farmers should cook garbage before feeding it to swine, and prevent them from eating offal, such as dead rats, which often harbor the worms.

One way to destroy the worm is to store pork at a temperature of five degrees Fahrenheit for twenty days before it is used.

Pork products, such as sausage and frankfurters, or meat loaf and chop suey containing pork, are foods that will bear special watching. In federally inspected plants, such meats must be heated to 137 degrees Fahrenheit, which also kills the worms. Non-inspected plants may constitute a danger, since some pork products are eaten as bought. In these days of "delicatessen buying", the consumer must be certain that reliable and clean shops are patronized.

When raw pork is bought for food, the one sure way to prevent trichinosis is to cook it thoroughly. Raw or rare pork is dangerous. Remember that a mouth full of pork may contains hundreds of the parasites causing trichinosis.

Cook pork slowly and thoroughly. Be sure that the meat is whitish gray through to the center. Don't eat pink pork.

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## OBITUARY

*Dr. John Henry Lewis*, aged 86, retired Dawson physician, died June 25, 1948. He was born in Quitman County in 1862, the son of the late John H. Lewis and Martha Dunning Lewis. He received his early education in the school at Lumpkin and attended Emory-at-Oxford. He graduated from the Atlanta Medical College in 1893 and took post-graduate work at New York Polyclinic College and Tulane University of Louisiana School of Medicine, New Orleans. He practiced medicine in Graves before moving to Dawson, where he continued his practice for 42 years. He was an honorary member of the Randolph-Terrell Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He was also an honorary member of P. T. Schley Masonic Lodge, and a member and steward of the Dawson Methodist Church. Dr. Lewis had a keen sense of humor, a sound philosophy of life, and was always glad to help others in any way he could. He is survived by two daughters, Miss Autrey Lewis, Dawson, and Mrs. George D. McElveen, Atlanta; two granddaughters, Misses Carolyn and Martha McElveen, Atlanta, and several nices and nephews. Funeral services were held at the Dawson Methodist Church with the pastor, the Rev. Jake Hillis, officiating. Burial was in Cedar Hill Cemetery, Dawson.

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*Dr. William Hill Lewis*, aged 66, well-known Siloam physician died at his home June 29, 1948. Dr. Lewis was the son of the late Judge and Mrs. Graham Lewis of Siloam. Judge Lewis served with distinction as solicitor general and judge of the Ocmulgee judicial circuit. He graduated from the Atlanta School of Medicine, now Emory University School of Medicine, Atlanta, in 1908. He was a physician of great ability, and was greatly loved by all who knew him. He was a member of the Greene County Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He was also a member of the Methodist Church. His Christian life, faith in God, and devotion to humanity were an inspiration to all. He is survived by his wife, the former Miss Louise Kendrick of Sharon; three sons, James Graham Lewis, Washington, D. C.; Hill Lewis, Jr., U. S. Navy, Charleston, S. C., and Kendrick Lewis of Siloam. Funeral services were held at his home, Siloam, with the Rev. W. M. Barnett, pastor of Greensboro Methodist Church, officiating, assisted by the Rev. E. A. Cottrell, of White Plains, and Dr. L. T. Newland, of Union Point. Burial was in the Lewis family cemetery, Siloam.

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*Dr. Thomas Eldridge Vickers*, aged 84, of Harrison, Washington County's oldest and one of its most prominent physicians, died at Rawlings Sanitarium, Sandersville, June 6, 1948. He graduated from the University of Georgia School of Medicine, Augusta, in 1885, and had practiced medicine in Washington and surrounding counties for 63 years. He was a physician of the old school, devoting himself untiringly to the welfare and interests of his patients. He was a member of the Baptist Church, was a Mason and a Shriner; and was a member of the Washington County Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. Surviving are four children, George Vickers, Harrison, C. H. Vickers, Knoxville, Tenn.; Mrs. W. T. Baugh, Madison; and Mrs. H. C. Gilbert of Tennille; 13 grandchildren and 11 great grandchildren; one sister, Mrs. Jim Whitaker, Montrose. Funeral services were held at the Bethany Baptist Church, with the Rev. R. D. Hodges of Dublin officiating, assisted by the Rev. B. A. Winburn, pastor of the Tennille Baptist Church. Burial was in Bethany Baptist Churchyard in Washington County.

* * *

*Dr. William B. Watkins*, aged 81, of Axson, retired physician, died in the Ware County Hospital, Waycross, May 20, 1948. Dr. Watkins was born in Brooks County July 22, 1867. He graduated from the Southern Medical College, Atlanta, in 1890. After graduation and acceptance in the professional ranks he went to Metcalfe to practice his profession and for many years he labored there with loving affection for the people and with exceptional success. His work was in the home and in the hearts of hundreds of people who looked to him for succor and aid and who were never disappointed. Surviving are his wife, Mrs. Ruby Watkins; three sons, Rushin R. Watkins, Reidsville; W. B. Watkins, Jr., Metcalfe, and Earl Watkins, Douglas; two daughters, Mrs. Henry Beasley, Jr., Reidsville, and Miss Ruby Watkins, Waresboro. Funeral services were held in the Methodist Church at Waresboro. Burial was in Axson Cemetery.

* * *

*Dr. Otho Odell Watson*, aged 47, Macon physician, died at Macon Hospital, March 10, 1948. Dr. Watson was born in Laurens County, Georgia, son of the late Z. F. and Emma Parker Watson. He graduated from the University of Georgia School of Medicine, Augusta, in 1927, and interned at the Savannah and Central of Georgia hospitals, Savannah. He did post-graduate work in nose and throat diseases at Detroit, and had practiced medicine in Macon since 1933. He served four years as an officer in the Medical Corps of the U. S. Army during World War II. He was a member of the Theta Kappa Psi medical fraternity, a Mason, a Shriner, and a member of the Idle Hour Club. He was a member of the Bibb County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. Surviving are his wife, Mrs. Margaret Baxley Watson, and a sister, Mrs. Tom Watson of Dublin. Funeral services were held at the chapel of Hart's Mortuary with Dr. Albert Trulock officiating. Burial was in Riverside Cemetery, Macon.

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# CORONARY ARTERY HEART DISEASE

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Most physicians are keenly interested in coronary artery heart disease, for personal as well as for professional reasons. This disease entity, subintimalatheromatosis of the coronary artery, has played havoc among members of our guild, and yet many are not alerted to its insidious approach in themselves. Inasmuch as any system may be involved, atheromatosis comes within the domain of the general practitioner as well as of a variety of specialists, neuropsychiatrists, gastroenterologists, endocrinologists, the orthopedists and the angiologists, as well as the cardiologists. Coronary atherosclerosis is most important, as it is the cause of more deaths than any other single disease process. It may cause the most excruciating pain that man is subjected to; it may masquerade as indigestion, or dyspepsia; or on the other hand, it may simulate the most acute abdominal condition, and may mislead the surgeon to undertake an operation.

All chest pains are by no means cardiac or even thoracic in origin, just as all epigastric pain is not of necessity abdominal in origin. However, in men approaching or just past middle age, who have substernal pain, coronary artery disease should be suspected. Shortness of breath and heart failure may be presenting symptoms instead of pain. The disease is three times as common in men as in women, and usually develops insidiously until the prime of life and then strikes with a vengeance. Fairly well-to-do sedentary, skilled workers, business men, and professional men are the most likely victims.

Great interest is being exhibited at this time in the study of atheromatous disease of the coronary arteries as the most common of the serious degenerative diseases. During the past few decades most of the infectious diseases have been brought under control, and many potential victims have been spared only to develop arterial diseases. Palliative treatment of coronary artery diseases in general has long been accorded much attention. Modern clinicians recognize at least three types and a fourth form of coronary artery heart disease, each of which responds most satisfactorily to a specific type of therapy. The possibility of *curative* or *restorative*, and of *preventive* or *prophylactic* measures have been suggested, and put into practice.

The complete etiologic pathogenesis of atheromatosis has not been established. *Hereditary* factors must be conceded to play an important role, and certain conspicuous types of familial disturbances of *cholesterol metabolism* have been reported. The tendencies to less conspicuous but just as serious disturbances in fat metabolism occur in many more people and are recognized, but are more difficult to explain or elucidate. The problems of subintimal atheromatous degeneration at strategic points, as

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bifurcations in the coronary bed, are challenging and raise many intriguing questions of why, wherefore, and when.

*Hypertension* predisposes to this subintimal atheromatosis at strategic points, as well as to generalized medial proliferation. *Diabetes mellitus* is commonly accompanied by a hyperlipemia and atherosclerosis. However, these disorders are not prerequisite to the development of atheromatous disease which may be commonly found in individuals in robust health, particularly heavy eaters who lead *sedentary lives*, and in hereditarily predisposed individuals who eat, drink, and *smoke or chew tobacco* excessively.

Cholesterol metabolism is seemingly efficient in not more than half of normal adults who retain the ability to metabolize satisfactorily dairy products, particularly fats, butter, cream, rich milk, cream cheeses, egg yolks, and fat meats. Most individuals handle these satisfactorily in childhood. The reason for a change in this is still obscure. The enzyme system involved in cholesterol metabolism has not yet been identified.

Pathologists have clearly defined this type of arterial disease as subintimal atheromatosis, and emphasized its importance.[1] Some have investigated the pathogenesis of intimal and subintimal fatty degenerative and infiltrative processes.[2] Atheromatosis is not to be called arteriosclerosis and this term should be restricted to the designation for the common senile type of medial proliferation and degeneration. The arteries enlarge and elongate and produce a state of tortuousity but the lumens are not narrowed as in subintimal atheromatosis or intimal proliferation. It develops characteristically at the orifices and segmentally at the bifurcations in secondary arterial systems, particularly those of the heart or coronary bed, but also of every part and may be predominent in one system or another. The ascending aorta and thoracic arch or just the abdominal segment, or the cerebral arteries, or the mesenteric arteries or the renal arteries may be especially affected.

*Pathogenesis*: Subintimal atheromatous plaques are made up of cholesterol and cholesterol esters, and some pultaceous matter, and later deposition of calcium at times. The subintimal plaques may be started by wandering histiocytes from the liver, laden with cholesterol and cholesterol esters, penetrating the intima at strategic places. The intima may be more permeable as a result of turbulence, pressure, and blood supply from the medial vasovasorum. The emulsion of cholesterol and cholesterol esters in a supercharged blood plasma may possibly accomplish this penetration of the changed intima and add further increments to the plaques. Nothing is known as to what causes the derangement of the system that regulates lipid distribution in health or in disease.

Atheromatous subintimal plaques seem to grow or increase in size gradually, and encroach upon the arterial lumen and contribute to slow or more rapid occlusion. The intima may rupture with the formation of a thrombosis, and subsequent devastating ischemia of the tissue involved.

Blood chemical studies on a large series of patients with conditions that are known to be associated with atheromatosis have demonstrated high levels of total blood cholesterol and cholesterol esters quite regularly. Hypercholesterolemia may possibly be contributory and is an indication of the presence of an abnormal metabolic state which may be conducive to atheromatosis.

As a corollary to the findings it may be suspected that hypercholesterolemia may contribute to the development of atheroma, consequently it should be reduced if it is possible to do so. Further conclusions may be entertained; namely, that whenever hy-

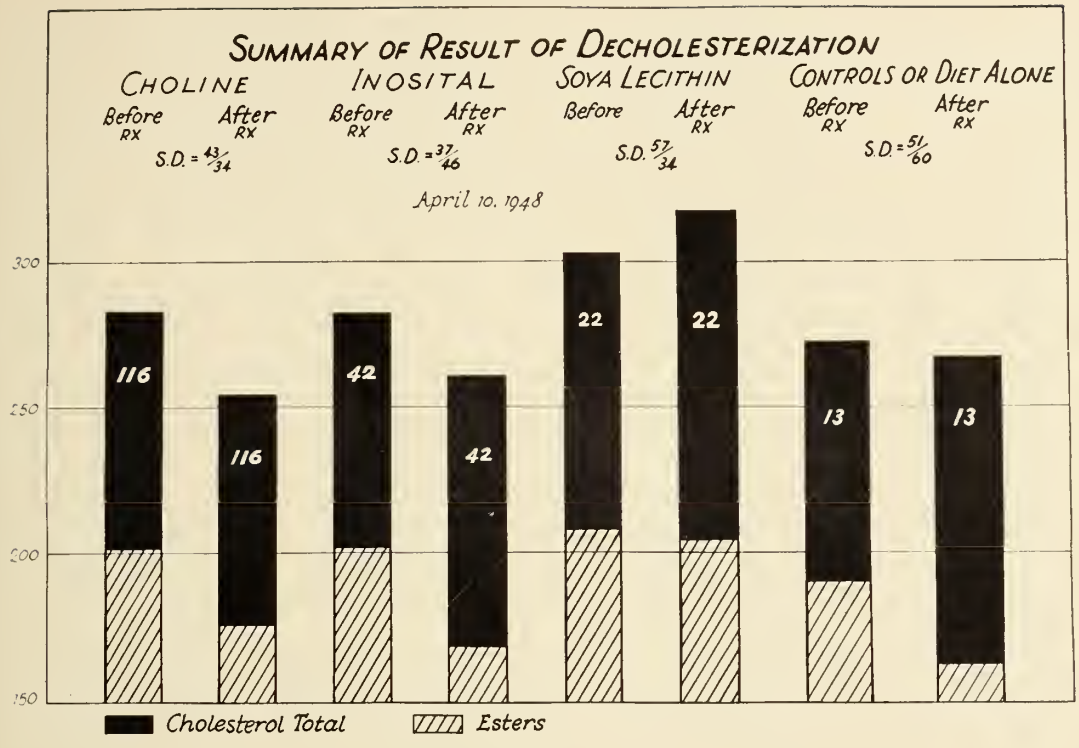



Chart 1.

**This graph represents the results of 3 to 6 months' treatment of patients with various types of decholesterolizing agents. The figures at the left indicate the blood levels of the total cholesterol and cholesterol esters. The number of cases in each series is indicated by the white figure in the black block of each column. The tops of the blocks on the left indicate the levels before and those of the right blocks indicate the levels of the total cholesterol and cholesterol esters after the course of treatment.***

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percholesterolemia is demonstrated in a patient steps should be taken to reduce it, if it is possible to do so. The effects of various lipotrophic agents certainly have been studied.

*Clinical Picture.* Symptoms of coronary artery disease appear only late, after much damage has been done. The asymptomatic stage varies in length. There may be vague, inexplicable fatigue, restlessness and anxiety, particularly after a heavy meal, choking, smothering, constricting, aching or burning or unpleasant discomfort in the chest, aortic sensitivity, or epigastric qualmishness, nausea, fullness, and indigestion may develop. Vise-like constriction, or a sensation of a heavy weight or pressure in the substernal region or precordium, interscapular or shoulder region, radiating into the left arm are characteristic.[3 4 5 6]

*Physical signs* are likewise absent until late in the disease. A slight increase in the aortic dullness in the retromanubrial area, accentuation of the aortic second sound and reverberation, with or without an aortic systolic murmur, in the presence of low blood pressure all are suggestive of aortitis. From these signs we may infer that the process probably involves the coronary arteries. Radiographic and electrocardiographic studies reveal very little more.

### *Types of Coronary Failure*

When coronary insufficiency develops, the clinical picture of three types of anginal failure and one of congestive failure must be differentiated as associated with coronary artery disease.

*Classic angina pectoris* occurs in certain

*The figures for this graph were assembled in my laboratory by Dr. John W. Chriss, and the graph was made by Mr. George N. Newman.

types of individuals, as an excruciatingly, sharp, precordial or substernal pain, brought on by one of the four E's: exertion, eating, emotion, or exposure. The paroxysm lasts from a few to 15 minutes at the most, and the pain may radiate into the arm, and is dramatically relieved by nitroglycerin or disappears on rest. The patient assumes a statuesque attitude momentarily with his hand to the precordium. The blood pressure usually rises, and the aortic second sound is accentuated, and an aortic systolic murmur is present. Sometimes electrocardiograms made during an attack may show typical or atypical changes. Usually the electrocardiograms are normal. The patients develop no fever, leukocytosis, or increased sedimentation rate.

*Protracted anginal pain* may result in intramural, subendocardial myocardial changes, or in a myocardial infarction, depending upon whether the coronary insufficiency is general or local. It may be the result of compression of the terminal coronary branches by increased intraventricular pressure of acute hypertension, or decreased systemic pressure and gradient of shock or hemorrhage, or a local obstruction of the lumen of a coronary artery due to occlusion of a plaque or a local thrombus or an embolus.

Coronary insufficiency due to any one of these causes produces prolongation or persistence of pain. The mechanism may be determined by therapeutic tests which should be applied promptly and according to the blood pressure level. If elevated, nitroglycerin is given; and if depressed or low, whiskey should be used. Other vasodilators have been tried, including papaverine, aminophylline intravenously, and tetraethylammonium chloride.

In *coronary insufficiency* with intramural ischemia, the pain may be temporarily relieved by nitroglycerin, and the electrocardiogram shows depressed ST segments. The condition of subendocardial infarction develops gradually. Usually no fever and only slight, if any, leukocytosis or increase in the sedimentation rate develops.

In *coronary thrombosis* the pain is usually not relieved by nitroglycerin or vasodilator tests, and morphine is usually necessary to bring relief. This is indicated if the pain persists after 15 minutes or more. Characteristic electrocardiographic signs are elevation of the ST segments and negativity of the T wave beginning in the terminal part, recorded in leads 2 and 3, or in 1 and 4, and in precordial leads.

### *Treatment in Coronary Artery Heart Disease*

Treatment must be both immediate or palliative and subsequent or corrective. Cardiac pain demands relief but the steps taken depend upon the clinical judgment and diagnosis. Acute paroxysmal cardiac pain may be angina pectoris, coronary insufficiency or thrombosis if prolonged. In angina pectoris the patient soon learns that stopping in his steps, and assuming a statuesque attitude and remaining absolutely motionless will bring relief.

The physician should immediately give *nitroglycerin* 0.3 mg. or 1/200 grain under the tongue, which usually brings relief promptly or aborts an attack. This dose may be repeated if the relief is not satisfactory, but a larger dose may sometimes cause collapse. In patients with low blood pressure, alcoholic beverages may accomplish the same results more slowly, but more safely. After the pain has subsided, the patient should remain quiet at least ten minutes for every minute of pain.

*Recognize* and *modify* the *precipitating factors*, as effort to the point of fatigue, eating, emotional stress, strain, worry, or anger, and exposure to sudden cold wind

or rain. Steps must be taken to treat and correct progressive chronic illness, anemia, hemorrhage, or shock from trauma of a sudden severe type, surgical operation, or anesthesia, gaseous distention or overloading of the stomach, excessive drinking of alcohol or smoking tobacco. Any of these may bring on an attack of cardiac pain.

*Prevention of further attacks* by the avoidance of all precipitating factors is a matter of primary concern. The removal of causative pathologic processes may be considered, but as a rule these cannot be successfully attacked. The treatment of these factors and those concerned in atheromatous disease can only be touched upon in this paper.

*Potential etiologic factors* must come in for some consideration even though at the present time very little can be accomplished. The current trend in the management of coronary artery disease is to try to do something about it but particularly to remove the *predisposing* condition. Some of these, as *obesity*, may be favorably influenced by sharp restriction of fat intake and reduction of body weight. The control of *diabetes mellitus*, especially hyperlipemia and the maintaining of a normal acid-base balance, does much to postpone trouble. The *hereditary factors*, of course, cannot be changed in any individual.

*Hypertension* may be controlled by a very sharp restriction of the salt intake and as nearly an absolutely *sodium free diet* as possible. *Vasodilators* and *vascular alteratives* as aminophylline 0.3 grams, (3 gr.) three times daily or 0.5 grams, (7½ gr.), by rectum, or potassium iodide saturated solution 10 drops three times daily, increasing a drop a dose a day, are the time honored remedies. The oral administration of niacin 50 mg. and niacinamide 50 mg., or doubling both of these helps some patients. Etamon (tetraethylammonium chloride), and priscol are still in the experimental state. The use of tobacco or nicotine in any form is, of course, absolutely interdicted.

*Syphilitic* or *atheromatous aortitis* or valvular disease, as aortic stenosis with or without insufficiency, in some cases seem to be ameliorated by potassium iodide. Aortic and mitral disease of rheumatic origin, in spite of very little history of rheumatic activity, are recognizable and usually irreversible. Valvular diseases, except in the acute stages, warrant the use of vasodilators, especially for pain or edema.

*Prophylactic treatment* may be carried out by the use of nitroglycerin at the very suggestion at the beginning of an attack or under circumstances which might precipitate an attack. Every attack should be aborted or cut short as soon as possible.

### *Acute Coronary Insufficiency*

The more recently recognized state of *acute coronary insufficiency* in which pain has persisted in prolonged attacks is accompanied by myocardial ischemia, which should be relieved promptly or prevented. The terminal branches of the coronary bed that come off at right angles from the main arteries, penetrate the myocardium and end just before reaching the endocardium may be compressed by high intraventricular pressure of hypertension. On the other hand, when the pressure in the systemic circulation falls suddenly in hemorrhage or shock, the pressure gradient drops off sharply in the coronary arteries; the circulation in the terminal branches may also be interrupted. The compression of the subendocardial arterioles should be promptly relieved or a precipitous drop in the general pressure should be overcome as quickly as possible. Such inadequate irrigation may produce irreversible myocardial changes, the so-called intramural diffuse infarction from prolonged anoxia.

If the seizure of cardiac pain is protracted, *emergency steps* should be taken to prevent coronary insufficiency and myocardial damage. The circulation usually responds better in such cases to *whiskey* than to *nitroglycerin*, because of the stimulating effects of alcohol tending to maintain blood pressure. *Caffeine sodium benzoate*, 0.25 to 0.50 grams (3¾ gr. to 7½ gr. to 15) or *nikethamide* 1-5 cc. may be desirable as stimulants.

*Shock* should be combatted with *oxygen under 2 to 4 cm. water* pressure, and injections of serum albumin or plasma; if *hemorrhage* has taken place, *whole blood* should be substituted to restore the blood volume. Oxygen, sedation and complete rest must be maintained. Adequate water balance should be established with 5 per cent glucose rather than normal saline. The general metabolism may be improved by saturation with vitamins and plasma proteins.

*Persistent pain* calls for narcotics, as morphine 15 mg. (¼ gr.) intravenously, or demerol 25-50 mg. (⅓ to ⅔ gr.) intravenously. Papaverine 0.2 gram (3 gr.) may be used and may be repeated every 2 or 3 hours, and/or aminophylline 0.5 gram (7½ gr.) may be given intravenously.

Atropine 1 mg. (1/65 gr.) is used to relieve the vagus reflex tone from gastric distention.

Etamon (tetraethylammonium chloride) 1 to 5 cc. intravenously may be tried if the blood pressure remains high, and the paroxysms of pain recur.

*Status angiosus* or a series of frequently recurring attacks may be interrupted by a *course of intravenous niacin* (nicotinic acid) injections of 100 mg. in 500 cc. of 0.9 per cent saline or 5 per cent glucose at a rate just sufficient to produce flushing, usually 1.5 to 2 cc. per minute. One infusion is given and 24 hours later a second; 12 hours later a third, and 8 hours later a fourth, and thereafter every 8 hours for 5 days. The course may be repeated if relief has not been obtained.

*Chronic coronary insufficiency* may also be improved by niacin intravenously. Alcohol 5 per cent in 5 per cent glucose, aminophylline 0.5 gm. (7½ gr.) slowly intravenously and in a suppository by rectum at 12-hour intervals have been found effective.

*In acute coronary thrombosis* emergency management is necessary. The acute excruciating pain must be relieved with morphine sulfate, 10 mg. to 30 mg. intravenously. If the patient is sensitive to morphine, use demerol 50 mg., and papaverine 65 mg. intravenously. Atropine sulfate, 1 mg., may be added as an antispasmodic. Repeat if necessary to relieve pain.

*Oxygen* administration by mask in as near 100 per cent concentration as possible is advantageous and often relieves pain and should be continuous in the presence of dyspnea, cyanosis, and pulmonary edema.

A mixture of diuretics as aminophylline, 0.5 gram (7½ gr.) in 25 to 50 cc. of 50 per cent glucose or alcohol 5 per cent in 5 per cent glucose may be given instead as a vasodilator with or without a mercurial diuretic 1-2 cc., and ascorbic acid 0.3 gram may be given intravenously if there is cardiac asthma or pulmonary edema.

Serious coronary occlusion cases with massive myocardial infarction, critically low blood pressure or embolism are the indications for *anticoagulant therapy*.

If *embolism* occurs, give *heparin* intravenously intermittently in doses of 50 mg. of heparin in 5 cc. normal saline (1 cc. containing 10 mg.) intravenously every 4 hours or 100 mg. in 10 cc. of normal saline or in 5 per cent glucose by intravenous drip continuously, starting at 15 to 20 drops per minute. The rate is controlled by determining the coagulation time by the Minot-Lee method every 3 to 6 hours for

24 hours and then every 12 hours. The coagulation time should be maintained between 15 and 25 minutes. Heparin, 200 mg. in 2 cc. Pitkin's menstruum may be given intramuscularly, but it causes much pain and often some bleeding. At the same time *dicumarol* should be started by mouth in a 300 mg. dose and the prothrombin level should be established.

Give dicumarol 100 to 300 mg. daily after the morning prothrombin level has been determined and until 50 per cent of normal activity has been reached. Proceed more carefully after the prothrombin activity has been depressed to 50 per cent, giving 50 to 100 mg. each morning until a level of 30 per cent of normal prothrombin activity is reached.

After reaching a 30 per cent level it is best to stop dicumarol for several days since the level of activity is likely to drop lower without further dosage. When the level again rises to 50 per cent, give 50 to 100 mg. daily, attempting to hold level between 30 and 50 per cent of normal. Maintain the prothrombin activity for four to six weeks, or certainly as long as the patient is in the hospital, and then discontinue the use of dicumarol unless evidence of thrombophilia.

If prothrombin activity gets below 30 per cent, watch for hemorrhagic phenomena, such as red cells in the urine, petechial spots or purpuric areas. Give 60 to 75 mg. of synthetic vitamin K intramuscularly or intravenously. Give a second dose in four hours, and repeat if bleeding persists. In the event of an alarming hemorrhage, give freshly citrated blood as often as it is needed. It is to be remembered that stored blood loses its prothrombin in from 24 to 36 hours.

If *myocardial insufficiency* intervenes, *phlebotomy oxygen*, under pressure, morphine, sedation, and digitalization must be carried out with care. A mercurial diuretic, especially the new combination of thiomerin, has in our experience been most safe and most effective.

### *Experimental Therapeutics*

The age-old quest for the fountain of youth and its miraculous rejuvenating elixir is now being led by biochemical researchers in the search for more effective lipotrophic, lipid mobilizers, or decholesterizing substance. Dietary regimens, along with the sharp restriction of animal fat intake, are prophylactic measures, but the effects are usually not enough to control situations in which the abnormal chemical processes have gone on for years. The desired substance is one which would promptly decrease the lipid levels in the blood and thus delay the development of subintimal atheromatous plaques.

If the high blood cholesterol level can be reduced, it may contribute not only to halting the increase in size, but might possibly lead to the removal of part of the fatty substances from the subintimal pathologic deposition of cholesterol and cholesterol esters and some other lipids. This is really more than should be hoped for since in long established plaques, degenerative changes, fibrosis and calcification have usually taken place and probably made the process practically irreversible. Some patients proven to have atheromatous disease have been shown to have had normal blood cholesterol levels. Hypercholesterolemia may be refractory to decholesterizing agents.

The investigations of the past decade concerning lipid metabolism have elucidated to some extent the mobilization and the transportation of neutral fats, cholesterol and cholesterol esters in the body. The finding of fatal fatty degenerative changes in the livers in chronic diabetic dogs that had been depancreatized dogs and maintained

on insulin, led Allan et al[10] to demonstrate prevention and cure of this fatty cirrhosis with fresh whole pancreas; Fisher[10] accomplished the same results later with dried pancreas. Hershey[10] found lecithins similarly effective, and Dragstedt, Chaikoff, Wolfe, and others simultaneously prevented and cured fatty livers with pancreatic extracts. Best and Huntsmann established the fact that choline was the effective principle. Several protein-free decholesterizing extracts of pancreas have been prepared and choline, methionine, betaine, lecithins, and inositol have been used to obtain the normalization which had been produced by fresh and dried pancreas and extracts. Choline administration was found by Friedlander and Chaikoff[10] to effect a rise in phospholipids.

Clinically, in patients a clearing of ascites and a decrease of liver enlargement have been repeatedly accomplished in early cases of nutritional fatty cirrhosis of the liver in alcoholics by the use of choline by Broun and Muether, Russakoff and Blumberg, Herrmann and Rockwell, and others. Lipocaic (Dragstedt), lipolysin (Wolfe), and fraction AR (Chaikoff et al) as well as choline, methionine, betaine, and inositol, have been definitely established as lipotrophic agents.[10] These substances have been shown by biochemists to be mutually related in fat metabolism. They have been found to contribute to the appearance of choline or choline-like substances in the urine, giving a positive reaction with Kraut's reagent. These substances, unlike acetyl choline or mecholyl, produced heart block in atropinized animals.

This group of substances, such as choline, inositol, and lecithins, which are found in the pancreas and in proteins, might possibly mobilize lipids and with the help of unsaturated fatty acid change cholesterol to lecithins and lipid phosphorous. It seemed likely that lipotrophic decholesterizing agents might possibly reduce abnormal cholesterol levels in blood plasma and tissues.

In order to test this hypothesis, several series of 3-year-old hens of high-egg producing stock were maintained on the standard laying mash and studied. Hypercholesterolemia and high tissue cholesterol levels had been demonstrated in various control series of 26 old hens. In two series the additional feeding of choline chloride in 0.5 gram doses to 26 old hens of the same breed showed fairly regular reduction of cholesterol levels in the blood and in the aorta, heart muscle, and liver. The administration of inositol in 0.5 gram doses to another series of 3-year-old hens had less but still apparently some decholesterolizing effect. The administration of methionine in 0.5 gram doses per day to two other series, a total of 23 2-year-old hens, had seemingly the greatest decholesterolizing effect.[12]

In patients with hypercholesterolemia and coronary artery disease, the restriction of animal fats in the diet and the administration of potassium iodide and of thyroid extract have been shown to lower blood cholesterol levels after several months or years. The administration of choline, methionine, and inositol has produced, in a majority of patients, some slight reduction of blood cholesterol levels and slight rises in lipid phosphorous after 2 to 6 months of treatment. Higher dosages of these parts of vitamin B complex from 10 to 20 grams may be the basic diet and is of considerable importance, and in some refractory cases the exhibition of high doses and of other substances will probably be necesssary to accomplish decholesterolization. The enzyme systems responsible for the mobilization and degradation of cholesterol to lecithins must be established.

*Summary*

The present concepts of the factors concerned in the development of coronary atheromatosis and the clinical pictures that result have been delineated. The subintimal plaques in the coronary arteries are incriminated as basically responsible for the pathologic physiology. Possible new approaches to the prevention, postponement, arrest, or possibly decrease have been described.

Dietary restrictions of the sterol intake and the judicious use of potassium iodide and thyroid extract in selected cases seem to be justified.

The success of administration of other lipotrophic agents seems to have opened another promising method of therapeutic attack of the serious process of premature aging.

*Note*: The experimental work mentioned in this paper was supported by grants-in-aid from the H. H. Weinert Fund, the Commercial Solvents Corporation and Corn Products Refining Company Fund.

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## POST-GRADUATE SEMINAR AT EMORY

A post-graduate seminar will be held at Emory University School of Medicine October 11 through 15. Note program in this JOURNAL, and make your reservations now.

## PULMONARY VASCULAR OBSTRUCTION DUE TO SARCOID

*Case Report*

WILLIAM HARBIN, JR., M.D.
EDWARD BOSWORTH, M.D.
*Rome*

Failure of the right heart from pulmonary vascular obstruction caused by sarcoid has been rare. The possibility of this occurring has been mentioned by several investigators,[1 4 5 8 10 11 13] but most of the references are vague and do not contain adequate pathologic data. Several recent compilations of the causes of *cor pulmonale* and progressive right heart failure[14 17] do not include pulmonary fibrosis due to sarcoid as an etiologic factor. Authoritative statements have been made that death is not known to occur from such disease.[3]

The discussion of sarcoid, which will be given with this case report, will deal only with pulmonary and cardiac involvement. A review of the medical literature reveals that references are not infrequently made to right heart failure from pulmonary fibrosis due to sarcoid. With one known exception these statements have not been supported by autopsy findings. Recently, in a group of cases reported from the Lawson General Hospital,[16] there was one in which death was due to diffuse, firm cellular infiltration of the lungs, leaving very little uninvolved tissue. There was relative right ventricular hypertrophy. The clinical and autopsy findings in this case indicate that there was marked encroachment on the air space in the lungs due to extensive nodular involvement and this may have been a factor in producing death. No mention was made of peripheral edema or ascites.

There have been numerous reports of the

Read before the Medical Association of Georgia, Atlanta, April 28, 1948.

relatively common involvement of the myocardium and pericardium by sarcoid. These pathologic findings have been correlated clinically with conduction defects and with congestive heart failure.

This case is being reported for two reasons: 1. It is not generally known that death may result from pulmonary hypertension associated with sarcoid. 2. The pathologic information on this subject is very limited.

*REPORT OF CASE*

A twenty-eight year old married white female was admitted to the hospital on February 13, 1942, because of weakness and shortness of breath. The dyspnea began three years before admission, was associated with fatigue and had disabled her for eight months. She was examined elsewhere in May 1941 at which time her temperature was slightly elevated and an x-ray diagnosis of pulmonary sarcoid was made. A productive cough was present in the morning, occasionally followed by vomiting. Later the cough became dry and the vomiting decreased. She had been hoarse for several weeks, and two weeks previously, for several days, there was pain in the right chest which was worse with breathing. There was nothing in her past history which was significant with reference to her present illness.

When examined she was found to be a pale thin woman who weighed 100 pounds. She became dyspneic after talking for several minutes. Venous pulsations were noticeable in the neck, and expiratory sounds were found to be rather harsh in both upper anterior, and the lower left posterior lung fields. An occasional fine crackling rale was heard in the second left interspace close to the sternum. The respiratory rate was 32 and the heart rate was 100. When the heart was examined, an impulse was seen and felt in the second left interspace close to the sternum. All sounds were heard poorly with the exception of the second pulmonic sound which was sharply accentuated, and in this area there was a rough systolic murmur. The blood pressure in both arms was 85/65. In other respects the physical examination was negative.

The circulation time from arms to tongue was 22 seconds, and the venous pressure was 9 cm. of water. With the exception of a slight macrocytic anemia and the absence of free hydrochloric acid in the gastric contents, routine and special laboratory examinations were essentially normal.

The electrocardiogram showed slight right axis deviation. An x-ray film of the chest taken on admission showed many miliary-size nodules scattered throughout the parenchyma of both lungs with a fine lacy fibrosis, giving a somewhat reticulated appearance. The heart shadow presented an unusual configuration with a globular, convex upper left border. It was enlarged in all diameters. Oblique films and chest fluoroscopy showed this enlargement to be due chiefly to an increase in the size of the right ventricle, right atrium and a dilated pulmonary artery.

Therapy consisted of digitalization, liver extract, parenterally, restriction of activity, dietary instructions, and hydrochloric acid with meals.

There was symptomatic improvement for one year and thereafter the presenting complaints became more marked and enlargement of the abdomen was noted. The cardiac impulse became visible in the second and third left interspaces, fluid was present in the abdominal cavity, the liver was enlarged, and the ankles were

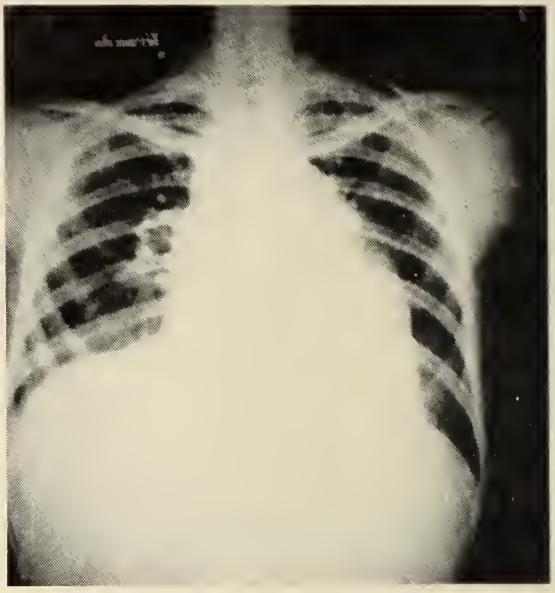


**Figure 1**
**Photograph of chest roentgenogram.**

swollen. On one occasion her cough became much worse for several days, and moist rales were heard at both bases. A small amount of fluid was found in the right pleural space. These findings disappeared and at no other time was there any evidence of pulmonary congestion.

Serial chest films showed a disappearance of the miliary lung lesion during the year following her first admission and progressive cardiac enlargement.

During 1944 and 1945 her cough, shortness of breath, ascites, peripheral edema and liver enlargement gradually grew more marked, and therapeutically her problem was very difficult. During the last seven months of her life cyanosis was a prominent feature. Several days before her death on July 28, 1945 auricular fibrillation was present for twenty-four hours.

An autopsy was obtained. The pathologic changes of interest were confined to the heart and lungs. The heart weighed 350 grams. On inspection the anterior surface was made up almost entirely of the right ventricle, which was tremendously enlarged. The right atrium was also greatly enlarged. The left chambers seemed quite small by comparison and on opening the heart this contrast was even more striking. The right ventricular wall was 8 mm. in thickness with an estimated capacity of 100 cc. The left ventricular wall measured 1 cm. in thickness. The right atrial cavity was about five times that of the left with an estimated capacity of 150 cc. Its muscular wall was also thickened in spite of the dilatation. The endocardium was everywhere smooth, with no thickening of any valve leaflet. The first portion of the pulmonary artery showed slight intimal atheromatosis but no other change. The aortic intima, the coronary ostia and arteries were normal. Both interauricular and interventricular septums were intact.

The lungs were greyish in appearance, with a rubbery, noncrepitous consistency. The larger branches of the pulmonary artery presented gross sclerotic changes. On section the lung tissue was tough as if there were an increased amount of fibrous tissue. There were no macroscopic nodules, pneumonia, or infarcts.

On microscopic examination there were slight atheromatous intimal changes in the pulmonary artery. The myocardium showed cellular hypertrophy of the right ventricular cells. One small tubercle was noted in the right ventricular myocardial wall, resembling those found in the lungs. The latter contained enormous

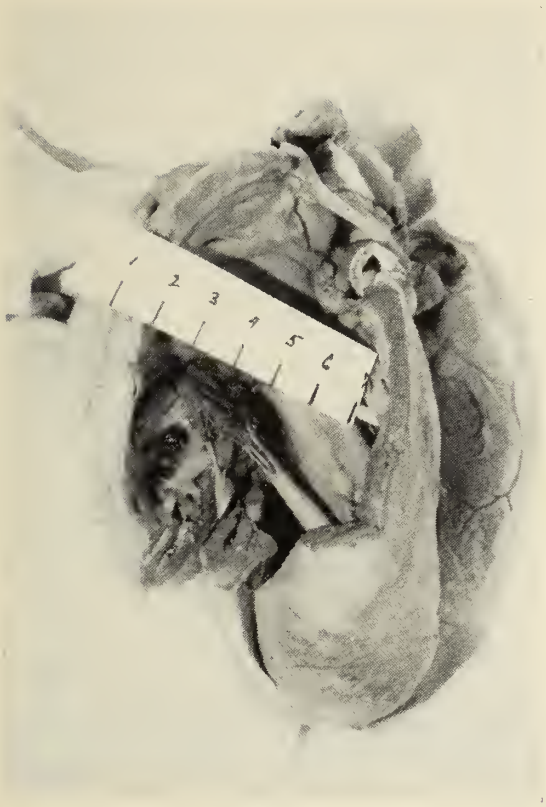


Figure 2
Photograph of heart with right ventricle open.

numbers of microscopic nodules composed of epithelioid cells with foreign body, giant cells and lymphocytes. These were surrounded by, and appeared to be the cause of, increased fibrous tissue in the lungs. It was felt that the microscopic appearance constituted adequate basis for the pulmonary vascular obstruction causing the gross heart changes described above, and that the lung lesions and the single myocardial tubercle were characteristics of sarcoid, since there was no necrosis or caseation. It was realized, however, that on histologic grounds alone, noncaseating tuberculosis or diffuse foreign body reaction could not be excluded. Several pathologists who reviewed the sections concurred in this opinion.

## *Discussion*

Clinically, this case is one of progressive failure of the right side of the heart extending over a period of some five years. Dyspnea, while a rather prominent symptom throughout the illness, was with one exception never accompanied by any demonstrable pulmonary edema. The cyanosis was probably a direct effect of inadequate blood flow through the lungs. Pathologically, the heart was of the true *cor pulmonale* type; there was no valvular or septal lesion and the hypertrophy involved only the right chambers.



Figure 3
Microscopic section of lung tissue.

It might be pointed out that on microscopic ground alone this death could have been due to miliary tuberculosis. This would be in keeping with the chief cause of death in persons with sarcoidosis. However, the clinical picture and the progressive enlargement of the heart by x-ray examinations leave little doubt that death was due to cardiac failure of a highly selective type. The later chest films showed no evidence of miliary lesions such as are ordinarily seen prior to death from tuberculosis, and even pathologically the criteria for miliary tuberculosis are not met since, with the exception of one small myocardial tubercle, the miliary lesions were confined to the lungs. This relative lack of myocardial involvement also separates this case from a larger, better known group of cases in which death has resulted from cardiac failure resulting from quantitative infiltration of the heart muscle by sarcoid tissue.

There was no clinical history of exposure to silicon or other material capable through

inhalation of producing a similar lung picture.

*Conclusions*

1. Pulmonary sarcoid may act to produce obstruction in the pulmonary circulation with resultant enlargement and failure of the right heart.

2. A case report has been presented which on clinical and pathological grounds fulfills the necessary criteria.

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## EYESTRAIN NOT TO BLAME FOR MOST HEADACHES

While most people usually attribute their headaches to eyestrain, the eyes are actually to blame in comparatively few cases of "the nation's most common complaint", according to a recent article by Frank D. Carroll, M.D., opthalmologist at Columbia University in New York City. An opthalmologist is a doctor of medicine who specializes in diseases of the eye.

Dr. Carroll described a true eye-strain headache as a dull sensation related to use of the eyes. Pain may be anywhere in the head or the back part of the neck, but it is generally around both eyes.

There are usually three possible sources of pain in an eye-headache. It may be due to refractive errors in the lenses of the eyes, such as result in far-sightedness, or in the faulty visions due to astigmatisms. Muscle imbalance in or around the eye may also cause headaches, chiefly by setting up sustained contractions of scalp and neck muscles. Diseases of the eye itself are a third possible cause. The New York doctor pointed out that symptoms of some eye infections are often mistakenly treated as sinus infections.

In discussing types of headaches which are often mistaken for eye-strain headaches, the opthalomolgist mentioned that habitual headaches after attending movies, basketball games or other spectacles are probably from nervous overstimulation. In such instances the pain is due either to constriction of blood vessels in the brain due to excitement, or to prolonged contraction of the scalp and neck muscles—Michigan State Medical Society.

# SYPHILITIC GUMMA OF THE AORTIC RING AND LEFT VENTRICLE, AND ANEURYSM OF THE SINUS OF VALSALVA, WITH DEMONSTRATION OF TREPONEMA PALLIDA

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*Athens*

Syphilitic gummas of the myocardium are rarely seen in adults. The causative organism is even more rarely demonstrated in such lesions. The following case of syphilis involving the aortic ring, the upper part of the left ventricle and the aorta is presented with photomicrographs illustrating *Treponema pallida.* Review of the literature will not be attempted.

*REPORT OF CASE*

A 28-year-old Negro soldier from Alabama was admitted to an overseas Army General Hospital because of increasing shortness of breath and known positive Kahn blood test. Past history revealed that he had gonorrhea in October 1943 without recurrence. He developed a penile chancre in September 1943, and reported to a physician who gave him 30 to 35 twice-weekly arm and hip injections, but discontinued treatment because of loss of his job. He was inducted in February 1944, with a positive blood Kahn test and normal spinal fluid. His antiluetic therapy in the Army was sporadic because of frequent transfer from one camp to another. In November 1944 he became dyspneic on exertion and developed a dry cough and pain in the anterior chest on deep breathing. He received symptomatic treatment with relief. He arrived overseas in January 1945 and, because his symptoms increased in severity, was hospitalized at the above-mentioned hospital in February 1945.

Physical examination revealed a well-developed and well-nourished Negro male. He complained of shortness of breath. Temperature was 102 F.; respirations were 24 per minute. Neck veins were distended. Pulse was rapid and full, with a rate of 110 per minute. Systolic blood pressure in both arms was 140 with diastolic pressure of 40 to 60. Systolic and diastolic blowing murmurs were heard over the entire precordium, with accentuation over the aortic area. Moist rales were heard at both lung bases posteriorly.

Roentgenologic examination showed generalized cardiac enlargement and haziness compatible with congestion of the lung fields. Electrocardiograms revealed a PR-interval of 0.20 seconds and $T_1$ and $T_2$ were diphasic. Laboratory examinations showed a quantitative blood Kahn test of 300 Kahn units; sputum and blood culture studies were negative, and sedimentation rate was 30 mm. per hour.

The patient was evacuated by air transport from overseas and admitted to an Army General Hospital in

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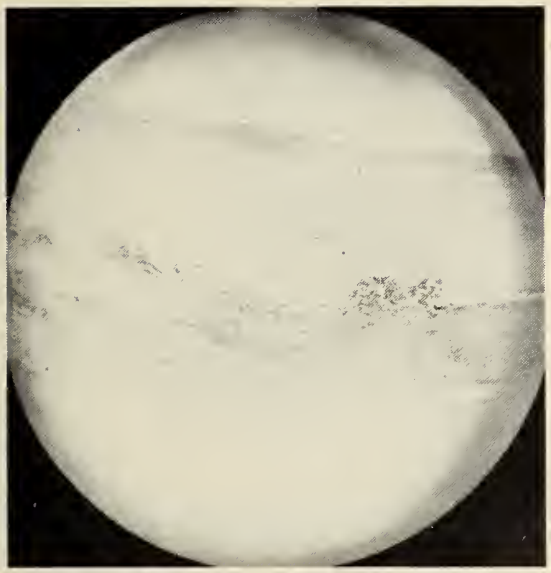


Figure 1
Lower power magnification showing marked aortitis (x40).

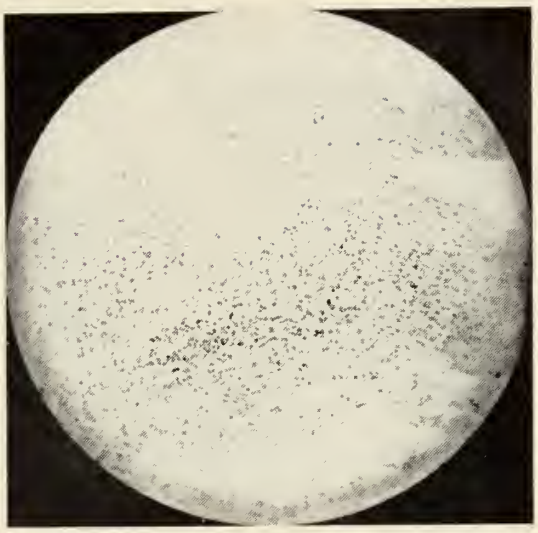


Figure 2
Aortic ring showing destruction of elastic fibers and and arteritis (x160).

the United States on March 19, 1945. He complained of severe shortness of breath and was orthopneic at the time of admission. Respiratory rate was 28 per minute and the temperature was normal. The neck veins showed marked distention and pulsation. There was a Corrigan pulse, and a capillary pulse could be demonstrated. Systolic blood pressure was 130, diastolic pressure 60 to 40 with no diastolic pressure obtainable in the lower extremities; Duroziez's and Traube's signs were present. There were no signs of dependent edema. The white blood count was 14,500 per cubic mm. and the sedimentation rate was 25 mm. per hour. He was given morphine, and was slowly digitalized. His pulse rate slowly decreased to 100 per minute, and dyspnea and orthopnea became less troublesome. PR-interval increased to 0.32 seconds and there was flattening of the T-waves in leads 1, 2, and 3. Suddenly, at 3:00 p.m., March 21, 1945, he vomited, lost consciousness, developed stertorous respiration and died.

*Autopsy Report*

Autopsy was performed 1½ hours after death. The body was well-developed, muscular and well-nourished. There was a slight pitting edema of both lower extremities. The superficial veins were distended. When the abdomen was opened, the liver and spleen appeared slightly enlarged. Approximately 150 cc of clear-colored fluid were in the peritoneal cavity. The pleural cavities contained a normal quantity of clear serous fluid. The left lung was bound to the pleural wall by fibrous adhesions. The pericardial sac was enlarged and contained 150 cc. of clear, serous fluid. The heart was markedly enlarged in all diameters and had stopped in diastole. The pericardial surfaces were smooth and moist. The ascending aorta was firmly adherent to the pulmonary artery.

The weight of the heart was increased, being 490 Gm. The tricuspid valve measured 14 cm., pulmonic 9 cm., mitral 11 cm., and the aortic 9.5 cm. in circumference. All valves, except the aortic valve, were thin, pliable, and translucent. The left leaflet of the aortic valve was almost destroyed and replaced by roughened pinkish-gray necrotic granulation tissue; the remaining edges were thickened. Part of the middle leaflet was destroyed; there was some thickening and rolling of the remaining middle and right leaflets. Above the left leaflet was an aneurysmal dilatation of the ascending aorta involving the left and middle sinuses of the Valsalva measuring 3.5 by 3.5 cm. The wall of the aorta was thinned to approximately one-half its normal thickness in the region of the aneurysm. The surface of the endocardium and intima of the aorta in the region of the left aortic valve leaflet was granular, pinkish-gray and necrotic in appearance. This process extended into the aortic ring and involved the softened myocardium beneath the aortic ring. The coronary ostia showed slight narrowing because of intimal thickening. The proximal part of the left coronary artery showed angulation by the aneurysmal formation. The intima of the aorta above the aneurysm contained one circular shaped yellow area which was thickened and slightly wrinkled. The abdominal and thoracic aortas were not removed but revealed slight atheromatosis on palpation The remainder of the myocardium was of flabby consistency; no other gummas were present. The wall of the left ventricle measured 2.0 cm. and the wall of the right ventricle 0.5 cm. in thickness.

The weight of the right lung was 750 Gm.; of the left lung, 600 Gm. Gray fibrous tissue covered the pleura of the lateral surface of the left lung. The bronchi contained a moderate quantity of frothy, pink, watery fluid; the pulmonary vessels were congested. The cut surface of the lower lobe of each lung was moist, pinkish-gray, and on pressure exuded frothy pinkish-red fluid. The tracheobronchial lymph glands were moderately enlarged and the cut surfaces were moist and mottled with coal pigment.

The spleen was enlarged, of soft consistency, and weighed 350 Gm. The liver weighed 1700 Gm. The inferior hepatic border was rounded. The cut surfaces of the spleen and liver revealed congestion. The remaining visceral organs and brain were essentially normal.

*Microscopic Examination*

Sections of the aorta above the aneurysm presented the typical appearance of syphilitic mesaortitis. The vasa vasora were surrounded by a thick collar of lymphocytes and plasma cells. Linear streaks of lymphocytes and plasma cells were present in the outer part of the media, and there was early destruction of the elastic fibers (Fig. 1).

Sections of the aortic ring and valve involved by the aneurysm revealed destruction of practically all the elastic fibers in the media of the aorta (Fig 2). The remaining fibrous stroma was infiltrated by innumerable polymorphonuclear leukocytes, lymphocytes and extravasated red blood cells. The intimal lining was replaced by a thick layer of necrotic, granular fibrin infiltrated by degenerating polymorphonuclears and occasional eosinophiles. Many fibroblasts and pale fibrous tissue were present beneath the layer of granular fibrin. Numerous mononuclear phagocytes were observed, but no giant cells were present. This granulomatous process destroyed the adjacent myocardial fibers



**Figure 3**
**Gumma, syphilitic, aortic ring and left ventricle, showing destruction of myocardial cells and characteristic inflammatory exudate (x400).**

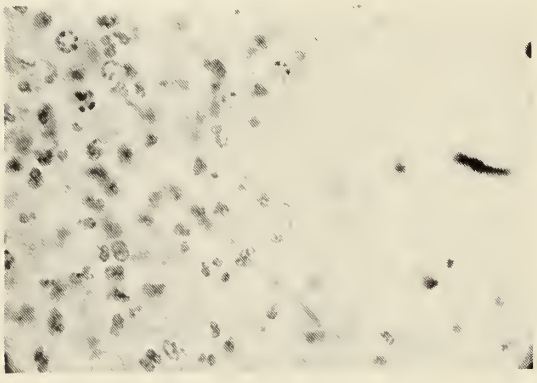


**Figure 4**
**Treponema pallida present in gumma of left ventricle (x1400).**

of the left ventricle. The surrounding myocardial fibers exhibited lysis and were partly phagocytized by mononuclear cells. These fibers were separated by many lymphocytes, plasma cells, and eosinophiles (Fig. 3). A moderate number of capillaries were noted in the periphery of the granulomatous process. Levaditi and Warthin's starry agar stains of these sections revealed typical *Treponema pallida* (Fig. 4).

Sections of the mitral valve and ring displayed slight endocardial thickening. Sections of the myocardium showed moderate hypertrophy of the fibers, cloudy swelling, and an increased quantity of granular yellow pigment surrounding the nuclei. Interstitial tissue was not increased in quantity. The arterioles revealed slight intimal thickening without an increase in perivascular cells.

Sections of the lungs displayed congestion and edema. Sections of the liver contained a small gumma beneath Glisson's capsule surrounded by mononuclears, plasma cells, lymphocytes, and one large foreign body giant cell. The remaining liver tissue appeared essentially normal, but the sinusoids were congested. Sections of the spleen showed congestion. Sections of the remaining visceral organs and brain were essentially normal.

*Pathologic Diagnoses*: The diagnoses were: Gumma, aortic ring, syphilitic; aneurysm, saccular, sinuses of Valsalva and ascending aorta, syphilitic; aortitis, syphilitic; valvulitis, aortic, syphilitic, with rupture of the left and middle leaflets; pulmonary congestion and edema, bilateral; pleurisy, fibrous, left; gumma, syphilitic, liver; and congestion of liver and spleen.

The immediate cause of death was probably acute myocardial failure secondary to rupture of the left and middle leaflets of the aortic valve superimposed on syphilitic aortic valvulitis with insufficiency.

*Summary*

*Treponema pallida* were demonstrated in gummas of the aortic ring involving the upper part of the left ventricle with associated syphilitic aortitis in a young adult Negro male.

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# CORONARY ARTERY DISEASE PRESENTING ATYPICAL SYMPTOMS

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*Thomasville*

Coronary artery disease in its various stages frequently presents very atypical symptoms. In this presentation I wish to discuss some of the bizarre clinical pictures that may be encountered. It is hoped that this discussion will stimulate greater care in the study of patients and will not encourage the promiscuous diagnosis of coronary artery disease on insufficient data. Most of these unusual symptoms have been previously reported by various writers. Herrick listed thirty conditions he had personally seen mistaken for acute coronary thrombosis.

Coronary thrombosis may occur without shock or cyanosis. Fever, leukocytosis and increased sedimentation rate may be extremely variable. The heart sounds may be normal or very abnormal. The heart rate and rhythm may be unchanged, or sudden auricular fibrillation may be the only symptom. Not infrequently the heart rate is slow in the early stages of coronary thrombosis. There may be no significant drop in the blood pressure. A pericardial friction rub is not always heard. Occasionally the diagnosis of coronary thrombosis can be made

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only with serial electrocardiograms.

Atypical radiation of pain in cases of angina pectoris or coronary thrombosis is usually attributed to a previously sensitized dermatome. When two disease processes exist the radiation of the pain will be influenced by the spinal segment which is most highly sensitized. In this manner patients with spondylitis, who have a coronary occlusion, may have most or all of the pain in the back. The same mechanism is involved when a man who has had repeated attacks of renal colic suddenly notices he has typical renal colic on exertion. Later the pain is proved to be due to coronary artery disease. Angina pectoris may radiate over the same area as a previous occipital neuralgia. Many years ago Mackenzie reported the pain of angina pectoris radiating to an abscessed tooth.

Coronary thrombosis may occur with epigastric pain and vomiting as the only symptoms. In patients who have had a chronic peptic ulcer the discomfort may suggest a perforation of the ulcer. On the other hand, patients with both peptic ulcer and angina pectoris may awaken in the night with typical anginal pain and get immediate relief from milk and an antacid powder. A few years ago one report described a patient admitted to a hospital in shock complaining of severe epigastric pain. An electrocardiogram showed acute coronary thrombosis. At autopsy a few hours later the coronary arteries were found to be normal but there was a perforated gastric ulcer. It was then assumed the abnormal electrocardiogram was the result of coronary insufficiency caused by the shock.

The relation between gallbladder disease and heart disease has been the subject of much controversy. Typical anginal pain has often been produced by pressure over the gallbladder when both gallbladder disease and abnormal coronary arteries were present. However, Fitz-Hugh and Wolferth feel that gallbladder disease may cause actual damage to the heart, and that the heart may completely recover after the gallbladder has been removed.

The so-called "silent coronary" always makes one wonder who took the patient's history or if the patient was able to be carefully questioned. However, many cases of proved cardiac infarction without pain have been recorded. White states "If coronary obstruction and cardiac infarction develop slowly and there is no excessive cardiac strain, there may be no symptoms at all even though there be extensive areas of damaged muscle and even if one or both coronary arteries have been occluded." Proved cases of myocardial infarction have been reported whose only symptoms were sudden dyspnea and progressive heart failure. I have seen one patient whose first symptom of coronary thrombosis was a convulsion produced by heart block.

The following cases illustrate some of the atypical symptoms mentioned.

### *REPORT OF CASES*

*Case 1.* A white physician, 50 years of age, had suffered with migraine for many years; he had had occasional mild hypertension for five years when working unusually hard. For about two years he had occasionally experienced very severe pain in his teeth of the lower left jaw. X-ray examination of the teeth showed no pathologic process. For several months he assumed it was some type of neuralgia, or in some way was related to the attacks of migraine. After being questioned about the relation of effort and exertion to these attacks, he became more observant and noticed that these attacks of very severe pain in the lower left jaw usually followed effort or emotional disturbance. There was no substernal pain or sensation of any kind elsewhere. These attacks recurred at irregular intervals for about two years. Finally one of these attacks was accompanied by severe substernal pain, which radiated down the left arm. An electrocardiogram revealed unmistakable coronary thrombosis. He died three days later.

*Case 2.* A white male, aged 47, was discharged from the Army in 1919 as having myocarditis. Patient thought this diagnosis was made because of a cardiac irregularity. Over a period of twenty years he had been told by many physicians that he had premature beats but he led a normal life as a teacher in a college. One night he was awakened by an excruciating pain in the region of the right brachial artery. A physician, arriving about thirty minutes later, found the patient in severe shock. The patient experienced no discomfort in any other part of the body. Several doses of morphine were required to give relief. An electrocardiogram taken three days later showed an-

terior type infarction. He made an uneventful recovery.

Six years later the patient experienced a sudden, very severe pain in the cervical region accompanied by mild shock. There were no chest symptoms of any kind. An electrocardiogram showed evidence of posterior infarction. Three years after this attack he had a sudden severe attack of substernal pain and died in a few days.

*Case 3.* V. F. D., a white male, 65 years of age, was first seen Sept. 18, 1946, complaining of pain at the lower end of the sternum, and nausea. He insisted he had had similar pains for forty years and had often been treated for peptic ulcer although there was no clear relation of the pain to eating and no definite relief from the use of alkali powders. This pain was never precipitated by effort or emotional disturbance. On Sept. 13, 1946, five days before he was first seen, there was radiation of the pain down the left arm. The pain was partly relieved by a dose of morphine. In the following four days he had several injections of an opiate for the same pain but there was only partial relief. There was no vomiting but nausea always accompanied the attacks of high epigastric pain. On Sept. 19, 1946 there was radiation of the pain to the left arm and the lower teeth on the right side.

Examination of the gastro-intestinal tract by barium meal and barium enema revealed no abnormality. Serial electrocardiograms showed an anterior infarction.

The data on this patient were especially difficult to obtain since he felt that much time was being wasted over an ailment he had had forty years. The history had to be picked from the patient over a period of two days.

*Case 4.* Mrs. H. D. N., white female, aged 65, was in good health until two weeks before the onset of present illness, when she consulted her family physician because of weakness. Her blood pressure readings were 140/80. The blood showed moderate secondary anemia. No other abnormality was found. Close questioning failed to elicit the presence of discomfort of any kind under any circumstance. The physician was called on the night of the onset of present illness because of a sensation of profound exhaustion. There was no discomfort of any kind but she was apprehensive and restless. After two hours she broke out in a profuse perspiration, which continued thirty minutes. The apprehension increased and she complained of an even greater sense of exhaustion. An electrocardiogram twenty-four hours later revealed an anterior infarction. Following this attack she developed an occasional substernal sense of fullness for the first time.

*Case 5.* H. T. B., white male diabetic, 49 years old, was sitting in a chair reading when he became nauseated. The nausea was slowly progressive for several hours. He then walked for an hour inspecting horses in a pasture. The nausea continued to grow worse. Attempts to induce vomiting were unsuccessful. He was not aware of pain or discomfort of any kind in the chest, arms, neck or back. After about twelve hours had passed a physician was called. Morphine was given because of slight shortness of breath, which was being noticed for the first time. Blood pressure readings were 120/80 when first seen. Three days later the blood pressure readings were 90/80 and there was slight fever for a few days. The diabetes was under control and there was no evidence of an insulin reaction. Twelve days after the onset of this attack an electrocardiogram showed posterior infarction.

Convalescence was uneventful for ten weeks. At that time he had a second attack of severe nausea without chest symptoms similar to the first attack. He was in shock for several hours. An electrocardiogram showed anterior infarction. At present his convalescence is uneventful.

*Case 6.* F. P., obese, white male, 51 years of age. Three days before he was first seen he was sitting quietly in a chair in his home when he was seized with a very severe pain in the right shoulder joint. This pain radiated down the arm and up the right side of the neck to the right suboccipital region. There was also some discomfort in the right subclavicular area. The pain was so intense that he did not think he could endure it. The arm felt clumsy and numb, but he was able to move it. The pain lasted about thirty minutes and disappeared as quickly as it appeared. For a few hours there was some soreness in the right side of the head and neck. He slept well that night but the next morning, while dressing, he had an attack similar to the above except that it started in the right suboccipital region and radiated down to the right shoulder joint. There was some slight discomfort in the right arm. This attack lasted about fifteen minutes. About three hours later he had a similar attack, lasting about ten minutes. He felt perfectly well the rest of that day but the following forenoon he had two attacks, each starting in the right suboccipital region and radiating to the right shoulder joint. Each attack lasted about ten minutes. All of these attacks started and stopped very suddenly. They were not related to physical effort or emotional disturbance. About four days after the first appearance of this discomfort he experienced a sudden, severe, substernal pain and was dying when his family physician reached him. It was impossible to determine if there was any discomfort in the neck, or in the right arm, with this final seizure.

This patient died before his examination was completed. His blood pressure readings were 162/110 the only time he was seen. An electrocardiogram could not be made during his first visit and he died before he could return for the study to be completed. The character of this patient's fatal seizure suggests coronary artery disease as the cause of all the pain he had during the last four days of his life.

## *Summary*

1. The literature has been briefly reviewed and cases were reported illustrating coronary artery disease with atypical symptoms.

2. Serial electrocardiograms are sometimes necessary to make a diagnosis.

3. Many laboratory procedures are useful in the diagnosis of coronary thrombosis, but should not be entirely substituted for careful clinical study of the patient.

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### HEALTHGRAMS

It has been estimated that nearly four per cent of all persons who visit physicians' offices complain of cough or expectoration. The alert physician will insist upon a sputum examination of all such patients. Such practice will be rewarded by the discovery of tubercle bacilli in three or four out of every 100 specimens examined. The family doctor will fairly often discover to his astonishment that a patient with slowly resolving pneumonia has an acid-fast reason for prolonged convalescence. Herman E. Hilleboe, M.D., Journal-Lancet, June, 1947.

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Every visit to the clinic or the doctor's office, every visit by the public health nurse, is health education, for the visit provides the most powerful type of learning, namely, experience. If the experience is not satisfying, there will be a tendency to avoid seeking health and medical care the next time that the individual or a member of his family needs it. Mayhew Derryberry, Ph.D., Pub. Health Rep., Nov. 14, 1947.

# THE USE OF ANTICOAGULANTS IN ACUTE MYOCARDIAL INFARCTION

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All observers are agreed that embolic and thrombotic phenomena are of grave prognostic significance in patients with acute myocardial infarction. These patients are prone to develop such complications because of the fall in blood pressure, the appearance of congestive failure in approximately 30 per cent, the occasional necessity for using digitalis, and the lack of muscular activity with slowing of the venous circulation. The anticoagulants have been shown to be effective in helping to prevent intravascular clotting and they are being used in patients with myocardial infarction with the hope of preventing thrombotic and embolic complications, thus reducing the death rate and lessening the morbidity.

## *Method of Use of Anticoagulants*

A general discussion of the anticoagulants and their use can be found in the reports of Allen[1 2] and Barker.[4] The treatment suggested below is adopted from their recommendations. In addition to the usual treatment for myocardial infarction, the patient is given 50 mg. of heparin intravenously every 4 hours and at the same time dicumarol is begun. The heparin is discontinued when the value for prothrombin is 30 per cent or less. Loewe and Hirsch[6] report satisfactory results in the treatment of venous thrombo-embolic disease by the use of heparin in the Pitkin menstruum. This may be given in 200 to 400 mg. doses every two or three days by deep subcutaneous injection, supplanting the intravenous administration. A recent report[12] indicates that concentrated aqueous heparin is effective when given intramuscularly at 8 to 12-hour intervals. Some observers feel that heparin is not necessary for reasons that will be mentioned later. In any case dicumarol is given on the first day in a single dose of 300 mg. On each subsequent day that the value for prothrombin is greater than 20 per cent a single dose of 200 mg. of dicumarol is given. More or less dicumarol may be needed; the aim of treatment is to maintain the values for prothrombin between 10 and 30 per cent. Before beginning treatment and before giving each subsequent dose, it is essential to obtain a daily prothrombin level in order that the dose of dicumarol will be efficient and safe.

## *Discussion*

Under the usual regimen 80 per cent of patients recover from the first attack of myocardial infarction. The remaining 20 per cent may die suddenly due to ventricular fibrillation, rupture of the ventricle, or complete heart block.[11] However, the majority die with congestive failure and embolism.

Mintz and Katz[7] analyzed 572 cases of recent myocardial infarction and found 125 (21.8 per cent) deaths for the entire series. There were 52 (9.9 per cent) patients with embolic and thrombotic phenomena; of these 29 (55.8 per cent) died, which indicates the greatly increased mortality in the presence of thrombo-embolic complications.

There are many reports[1 2 3 4] that indicate the efficacy of dicumarol in the prevention of thrombo-embolic processes. Allen,[1 3] using postoperative cases of pulmonary embolism and thrombophlebitis, has compared the actual number having subsequent venous thrombosis or pulmonary embolism and subsequent fatal pulmonary embolism when treated with dicumarol with the num-

From Department of Medicine, Emory University School of Medicine.
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ber expected if anticoagulants had not been used. Barker et al[4] have made a similar comparison, using actual figures of control cases not given anticoagulants. In both incidences there was a great reduction of mortality and morbidity.

As mentioned earlier, patients are prone to develop thrombo-embolic phenomena following myocardial infarction. In addition to the lowered blood pressure, congestive heart failure, and slowed venous circulation. 3 of every 4 cases of coronary thrombosis were found by Peters et al[11] to exhibit increased prothrombin activity, i.e., increased clotting tendency. It is felt that digitalis may also shorten the coagulation time and promote intravascular clotting under certain pathologic conditions. Mintz and Katz[7] found the immediate mortality rate of patients with thrombo-embolic phenomena complicating recent myocardial infarction to be twice as high in those given digitalis as in those not receiving digitalis. Their figures are reproduced in table 1. Peters et al[11] also found an increased mortality in their patients who received digitalis. Their mortality rate was 12.5 per cent in digitalized patients who received dicumarol, but was 53 per cent in similar patients who received no anticoagulant therapy. This suggests that the need for digitalis in patients with acute myocardial infarction makes anticoagulant therapy even more desirable than in those patients who do not require digitalis.

Following myocardial infarction, vascular complications seldom occur before the fourth day. Nay and Barnes[8] found that 87 per cent of second infarctions and 87 per cent of cerebrovascular accidents occurred between 4 and 20 days; 86 per cent of thrombophlebitis between 10 and 16 days; and 93 per cent of pulmonary emboli between 16 and 36 days. Therefore some writers[11] feel that heparin is not necessary in most cases.

The results reported from the use of dicumarol in acute myocardial infarction have been favorable. Nickol[9] treated 68 cases of acute coronary thrombosis with dicumarol and had a mortality rate of 16 per cent. There were 8 autopsies and none of these showed mural thrombi. This is a point of interest, since Blumer[5] reported as many as 50 per cent of cases of myocardial infarction were accompanied by mural thrombi in the ventricles. There were no proven embolic phenomena in Nickol's cases.

Wright[13] used dicumarol in 76 patients, of whom 15 died. There were 43 cases selected because of complications—repeated episodes of multiple thrombi or propagation of the original thrombus, repeated embolic phenomena. The anticipated risk of this group was 60 to 70 per cent but with treatment was 25 per cent (11 deaths). There were 33 cases with a first or second uncomplicated attack. Of these 4 (12 per cent) died against an anticipated death rate of 20 to 30 per cent.

Parker and Barker[10] treated 50 cases with a mortality of 10 per cent. There was but little influence on the total mortality rate; however, there was a marked reduction in the incidence of thrombo-embolic complications. Table 2 is reproduced from their report. It compares the favorable results in treated cases with a control group previously reported by Nay and Barnes.

Peters et al[11] compared 50 dicumarolized patients with 60 nondicumarolized patients. In the treated patients the death rate was reduced to one fifth and the morbidity rate to one eighth. Table 3, giving the comparison between the treated and the nontreated cases and the effect of dicumarol in digitalized patients, is taken from their paper.

*Table 1. Immediate Mortality Rate of Patients With Thrombo-embolic Phenomena Complicating Recent Myocardial Infarction With and Without Digitalis Therapy.* From Mintz and Katz.[7]

| | Number | Deaths | Per cent |
|---|---|---|---|
| Total | 52 | 29 | 55.8 |
| With digitalis | 20 | 16 | 80.0 |
| Without digitalis | 32 | 13 | 40.6 |

*Table 2. Acute Myocardial Infarction: Percentile Incidence of Vascular Complications After Anticoagulant Therapy and in Control Series.* From Parker and Barker.[10]

| Complications | Per cent | |
|---|---|---|
| | Nay and Barnes 1945 100 cases | Parker and Barker 1947 50 cases |
| Vascular complications | 37 | 4 |
| Second myocardial infarction | 15 | 2 |
| Pulmonary embolus | 14 | 2* |
| Cerebrovascular occlusion | 8 | 2 |
| Thrombophlebitis | 7 | 0 |
| Peripheral and arterial occlusion | 4 | 2* |

*Before anticoagulant treatment was started.

*Table 3. Dicumarolized versus Nondicumarolized Patients.* From Peters et al.[11]

| | Dicumarolized | | Nondicumarolized | |
|---|---|---|---|---|
| | No. | Per cent | No. | Per cent |
| Number of patients | 50 | — | 60 | — |
| Deaths | 2 | 4 | 13 | 20 |
| Clinical embolism | 1 | 2 | 10 | 16.6 |
| Number of patients given digitalis | 8 | — | 17 | — |
| Deaths of patients who were digitalized | 1 | 12.5 | 9 | 53 |

In none of the reported cases has dicumarol seemed to aggravate or complicate the course. Minor hemorrhage occurred in about 3 per cent of a large series of postoperative cases treated with dicumarol. Hypoprothrombinemia and hemorrhage can be controlled by large and repeated intravenous doses of menadione bisulfite and transfusions. Dicumarol has been given over long periods, as long as 2 or 3 years, without harmful effects. After myocardial infarction dicumarol is used in most cases for 4 to 6 weeks. The contraindications to the use of dicumarol include renal or hepatic insufficiency, blood dyscrasia with a bleeding tendency, recent brain or spinal cord operations, and ulcerative and bleeding lesions.

## *Summary*

Thrombo-embolic phenomena are of grave prognostic significance in patients with acute myocardial infarction. All observers have reported a marked reduction in the incidence of thrombo-embolic complications when dicumarol has been used, but opinions vary as to the influence on the total mortality.

The objectives of anticoagulant therapy in acute myocardial infarction, given by Parker and Barker,[10] are (1) the prevention of an extension of the thrombus, either proximally or distally to the original site of the closure, (2) the prevention of the formation of intracardiac mural thrombi, (3) the prevention of thrombophlebitis from which pulmonary emboli may arise and, (4), the prevention of thrombosis in peripheral arteries already considerably affected by arteriosclerosis. It appears that these objectives have been met.

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## DISCUSSION OF PAPERS BY DRS. HARBIN AND BOSWORTH; BY DRS. MULLINS, MARQUIS AND SCHULZE; BY DR. WAHL, AND BY DR. CARTER

DR. THOMAS ROSS (Macon): Of course, you realize how difficult it is to discuss all these papers

at one time but we have had some very definite advances in therapy, we have had some very interesting case reports and we have had a very timely discussion of the atypical cases of coronary occlusion.

As we go along further in any symposium, our attention is directed to the more interesting phases, the new things and particularly the things which are brought up last, but I should like to discuss the cases of Dr. Harbin and Dr. Mullins.

Dr. Harbin referred to the fact that Boeck and others did not include pulmonary fibrosis due to sarcoid as an etiologic factor in the causes of *cor pulmonale* and progressive right heart failure. Most of us don't know Boeck's sarcoid to this degree and I thought it might be well to discuss some of the other factors, those which we meet more often in our general practice, particularly that of chronic pulmonary conditions. All those doing veterans' work and who see people in the age groups of 50-54 have seen patients sent for cardiac evaluation because of shortness of breath and because of total disability supposedly on a cardiac basis, a great many of them with dyspnea and pulmonary emphysema, rarely to the extent of producing right ventricular failure, but I think the most common causes of *cor pulmonale* in the picture Dr. Harbin brought are bronchial asthma, chronic bronchitis, pulmonary fibrosis, all of which enter into this phase of the picture. We don't see pulmonary silicosis in our section. A good many sections of Georgia do have mines and quarries where you do see it. They all produce the picture Dr. Harbin brought to us, due to Boeck's sarcoid.

For therapy of underlying pulmonary disease, digitalis gives very little benefit. Morphine should in no instance be given for pulmonary dyspnea. Oxygen is probably the best agent of all.

The second case, "Aneurysm of Sinus of Valsalva with Demonstration of Treponema Pallida Due to Gummas," is an interesting one.

That is the second time I have ever seen spirochetes in myocardial slides. The first time was in 1928 when I studied at Emory and was shown slide after slide of this condition. I think that was greatly questioned by a great many people, but it can be done.

I'd like to tell you about two instances of congenital disease in which there was rupture of the sinus of valsalva through the outer portion of the ventricular septum. One occurred in a young Marine who had gone through three years of active duty and suddenly became a cardiac invalid within the matter of an hour and suffered rupture of the sinus of valsalva. It ruptured into the ventricle. That produced arteriovenous aneurysm. There was a continued loud murmur.

We had another case in the Army of rupture, but it ruptured into the myocardium and death was instantaneous.

There have been many papers reported on the other side of the picture of Dr. Wahl's discussion, notably that of Dr. Herrick in 1935, who reported 30 instances, I believe, of other acute conditions simulating coronary occlusion. I think Dr. Wahl has brought to us the other side of the picture, that coronary occlusion can simulate many other diseases and as he said, in a letter to me, he had hesitated a good many years to present the paper because he felt there might be some looseness in the diagnosis of coronary occlusion from symptoms and signs not sufficient to make such a diagnosis, but I think it is very timely on his part to give it.

Dr. Charles Stone has done a lot of work with dicumarol and I am sure he can tell you more than I can from what I have read.

DR. CHARLES F. STONE, JR. (Atlanta): I think Dr. Carter has certainly reviewed the present status of the use of anticoagulant therapy very adequately. No one is absolutely sure yet just where all of this therapy will lead, but it is promising in many directions.

One point that should be re-emphasized is that dicumarol should never be used without proper facilities for determining the initial prothrombin level as well as frequent determinations as the drug is given in order to judge the proper dose. Dr. Edgar Hull (New Orleans) has recently done several hundred prothrombin levels in patients with congestive heart failure and found that about 23 per cent of them had prothrombin readings less than half normal value. One-sixth of the patients were low enough to be almost in the therapeutic range to start with.

If dicumarol had been used in any of these patients, the results might have been disastrous.

Irving Wright has an interesting review of the use of dicumarol in post-coronary occlusion, reported in the December issue of *The American Journal of Medicine*. Because of his experiences, we have recently, in the last year, put two patients on dicumarol prophylactically. Each of these two patients had had previous coronary occlusions within a period of one year and each was sitting at home waiting for the fourth coronary occlusion to take him away. It was decided to put the patient on the drug for several reasons: One, it gave the patient something to fight the impending coronary with, at least in his own mind. Two, it made it necessary for him to get out of the house once or twice each week to have a prothrombin check and this meant forcing him to take some activity. Each of these patients has definitely been improved. One is now back at work and feels very well.

How much good the dicumarol actually did from a pharmacologic standpoint is too early to say, but the patients were benefited psychologically.

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## AIR TRAVEL BRINGS NEW MEDICAL REGULATIONS IN ENGLAND

Because the speed of air travel has produced special medical problems, new regulations have been established in England to reduce the risk of aircraft of travelers by air from abroad bringing disease into that country.

As an illustration of the problems involved, a journey from India to London by sea normally takes three weeks, during which time any infectious illness on board would become known and could be dealt with at the port of arrival. But a passenger by air can fly from Singapore in two days, and from India or South Africa in 36 hours. This time is much shorter than the normal incubation period of plague, cholera, yellow fever, typhus and smallpox—the diseases with which international control is mainly concerned.

Under the new air travel regulations, all incoming aircraft from places abroad will be met by medical officers. The commander of the aircraft will give the names of the place in which it has been during the last 14 days. Passengers showing no symptoms of an infectious disease will be given a card setting out the simple precautions to observe if they fall ill within 21 days of arrival. These include showing the card to their physician, who thus learns that his patient has recently arrived from abroad, where he may have been exposed to infection. If there is any doubt about the nature of the illness, the physician is to inform the health officer of the area at once.

Thus all cases of illness in travelers arriving by air from abroad can be traced and the necessary precautions taken. The regulations also apply to aircraft which, because of emergency or other reason, alight outside a customs airport.—Medical State Medical Society.

# PROBLEMS OF THE KNEE JOINT

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I have chosen as the subject for tonight's discussion the diagnostic factors in rupture of the meniscii of the knee joint. There are very few joints that can give you the diagnostic problems that the knee can. While this joint is listed as a hinge joint, its action is a little more than that. There is a little rotation with its function. The heavy ligamentous structures about this joint lend to the difficulty in the accurate diagnosis of its derangement.

The most frequent injury is that of a rupture of a meniscus. The mesial meniscus is the most frequently injured. One does not know how far back meniscus injuries were described, but in 1805 William Hey, an Englishman, wrote of "internal derangements of the knee" in his *Practical Observations in Surgery*. This term is still in common usage. His was the first description of the condition we know as "locking", and he suggested that it might be due to a meniscus injury. The treatment at that time was manipulation, so the observation was not confirmed. Over a hundred years went by with no significant change until in 1906 Sir Robert Jones added his observations from the surgical removal of the meniscus, or meniscectomy. He called attention to the longitudinal split, or bucket handle tear. Others confirmed this and the condition obtained impetus in the 1920s with numerous articles and varied observations. One of the significant features was that as surgery progressed and more arthrotomies were done, the incidence of normal meniscii operated upon increased to 30 plus per cent in some series. (Sir Robert Jones reported 10 per cent).

The damaging force in a meniscus injury is clearly recognized. With the knee flexed and bearing weight, a twist occurs. The meniscus is fixed between the tibial and femoral condyles, excessive rotation occurs and something must give. Hence the history of the mechanism of the injury is most important, but the same force may produce other injuries so other signs are necessary for a definite diagnosis. An important consideration in the history is the phenomenon of "locking", and particularly that of frequent locking.

I believe that my pre-war series contained more arthrotomies with normal meniscii because I was more apt to rely on the history. In the service we had to justify the operative procedure by a large percentage of return to front line status. We also found those who would subject themselves to needless surgery to avoid front line duty. And then there were those who would submit to surgical procedures to obtain a scar for the post-war pension evidence. These taught us to be most conservative and I would not operate unless all of the signs were seen by me personally to be positive.

The diagnostic criteria I find useful are:

1. *History*: Subjective localization of the pain before examination. The pain will be sharply localized to either meniscus and generally occurs with awkward movements. It is generally of a temporary nature with gradual subsiding, unless locking occurs—then it will be accentuated at times, but always sharply localized.

2. *Observation*: There will most often be an increase in the joint fluid. In the locked stage there will be a marked limitation of extension. Even in the post-locked or apparently quiescent stage, there will be a lack of complete extension which will be perceptible only when the two legs are actively extended to their utmost at the same time. Forced extension is painful and generally localizes the pain to the affected side. Acute flexion is also painful. It is interesting that when an old longitudinal tear is present, the locking occurs not infrequently with flexing the knee. It is not uncommon for this to happen in the flexed, sleeping position and the patient not be aware of it until he tries to straighten the leg in the morning.

3. *Palpation will localize the point of tenderness* to that area between the condyles, and there is generally a palpable fullness present in this space. There is always

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a palpable difference between both knees. I cannot overly stress the examination of the opposite extremity for comparison. Sometimes the lateral edge of the meniscus is felt to move freely under the palpating finger.

4. Under the manipulative examination, there is another sign that has not been described to my knowledge, and that is *rotation* of the heel. On rotation, the heel will cause pain when pointing to the affected side. This observation was first pointed out to me by Dr. Arthur Weiland of Coral Gables while we were on duty together at the Naval Air Station in Jacksonville. A complicated adaptation has since been described with the patient on his face, the operator's knee holding the thigh down, and the production of an audible click. I cannot evaluate this sign and I admit it needs much practice and attention to detail.

5. *X-ray examination should always be done* to rule out loose bodies, etc., which could produce the same symptoms and signs of obstruction between the condyles. Again comparative studies of the opposite knee are always indicated. Air studies have been described but their technical difficulties and the results have not justified their usage. There is frequently a narrowing of the joint space on the affected side when the locking has occurred.

All these signs should be positive before surgery is advised. If the history is suggestive, continued observation might bring them out, but consideration should be given to other etiologic factors, and the treatment guided accordingly.

The most complicating factor in my own experience is where there is marked relaxation of the anterior cruciate, or the collateral ligaments, sufficient to allow enough play, so that locking cannot occur. Here there has to be an evaluation of all of the signs and the amount of experience in the palpating finger is invaluable. It might be likened to the feel of the belly in appendicitis when the signs and symptoms are confusing.

But here there is other derangement of the knee besides meniscus injury, and consideration has to be given to this as well as the removal of the torn meniscus at the time of surgery. The cruciate should be repaired, or the collateral ligament should be repaired. The operator should be cognizant of these possibilities before making the incision, and should be prepared to complete the job at that time. I mention this because sometimes the anticipated extra work will cause you to vary the original incision so that everything will be possible by enlarging the exposure easily. This relaxation is further confusing if localization is not complete. It is a general rule that a torn mesial meniscus will lock, and a lateral one will click. This rule is not absolute but does have significnace. I once knew one very good orthopedist who, on the basis of average, would open the mesial side regardless of where the pain was localized. I will admit that he was more often on the right side than not, but I believe an evaluation of the aforementioned signs will allow one to localize the side a little more accurately.

The conservative treatment for a meniscus tear is surgical removal. Abnormal action of the meniscus, frequent locking, etc., produces damage to the articulating surface of the joint and may produce osteochondritis dissecans. True cartilage has no power of repair, and when damage is done it is permanent. The rational of meniscectomy is to remove the meniscus before damage of the articulating cartilage occurs. The meniscus is replaced by a fibrous tissue which attains the original anatomic configuration, and, if you will permit, it "cartilaginizes". It was my good fortune to see two of these removed at the Willis C. Campbell Clinic several years after meniscectomy for the purpose of microscopic study.

The reason for the surgical removal being the most conservative treatment is the same reason why manipulation to reduce locking is contraindicated. Any forceful attempts at reducing a locked meniscus bids fair to do more damage to the articulating surface than was done by the injury you are trying to correct. If for any reason surgery is to be deferred and the knee will not extend, then apply a cage knee cast with the knee flexed 20 to 30 degrees and allow weightbearing. In this mild flexion the cartilage will generally unlock itself. I use this procedure not infrequently where there might be question or where the surgery has

to be deferred.

Many surgical procedures have been devised for the removal of these torn meniscii, even to the midline incision through the patella so both sides could be seen. But it must be remembered that you are operating to save damage to the articulating surface, so the procedure should not produce more damage than the traumatic factor. Gentleness is stressed as in all surgery. Some operators will not sponge the joint surface except with moistened cotton. I personally do not think dry sponges harmful if used with care.

The accepted incisions are modifications of the anterolateral or mesial incision opening the anterior compartment, and a posterior one opening the posterior compartment. I feel the anterior incision the routine one, as visualization of the meniscus is nearly always accomplished through this incision. There are very few instances where visualization of the posterior compartment is necessary, but there are operators who routinely use the double incision. The reverse "J" is the classic incision.

Modification of the incision should be anticipated if ligamentous repair necessitates elongation. I have adopted the slightly angling straight skin incision with the ligamentous incision being at a more acute angle but still straight.

The articulating surfaces of the condyles of the femur, tibia and under surface of the patella should be examined with care, and their condition reported in the operative record. This is also true of the cruciate ligaments, and the opposite meniscus. It is not always possible to visualize all of the opposite meniscus but the anterior one-third can be seen and a tear in the anterior half diagnosed.

In the military service it was my fortune to operate on some 250 to 300 of these injuries. One series of 85, which were checked, 87 per cent were returned to active duty. I should guess the overall percentage would be around 80 per cent. This was for front line duty. Some few were returned to light duty until that was discontinued. Those with osteochondritis were surveyed out. This was due to my being with the Marines who tried to rule out any potential physical handicaps, but under civilian rules would be classed as excellent results. Some had severe osteochondritis, one with the entire shell of the mesial femoral condyle coming off as a solid cup. Functional motion was obtained, and the knee was improved, but the result was poor. Four infections occurred but fortunately all cleared with penicillin, and showed good results, but they were surveyed out. It is interesting that this occurred during an experimental using of zephyran with no other topical application. Because of these and other operating room infections, we returned to merthiolate. One took ten months to recover from a generalized muscular atrophy, and had to be temporarily braced, and was surveyed out with subnormal muscle power and would be classed as a poor result. We were never able to explain this condition.

I might stress the function of the quadriceps muscles. Their function is lost first and may be weak from long standing derangement. Quadriceps function should be restored even while the patient is in the postoperative splint, cast, or what not, and should be continued until the function is sufficiently normal.

Prior to military service I always used a full-leg cast and would leave this on 10 days and then use the back half for another 10 days to two weeks. During our many cases in service we ran through many types of post-operative cases, from no splints to full casts. I have personally adopted the plaster posterior splint with the knee in full extension and I encourage the patient to extend

the leg actively in the splint and allow weightbearing as soon as the patient will do so. I leave this on for 10 days and follow by a cotton two-way stretch bandage—not elastic. Then I use intensive quadriceps exercises, and advise their continuance until the atrophy has all been compensated for.

In the military service the average return to duty was six to eight weeks. The average return to scrimmage football is three months.

Removal of a torn meniscus is one of the most gratifying of all orthopedic operations from the standpoint of the surgeon as well as the patient. The diagnosis should be made as early as possible and removal accomplished. When the bugbear of letting the "oil out of the joint", and other equally fallacious concepts of joint surgery can be discouraged, the incidence of chronic joint damage of a permanent nature will be minimized.

## STUDIES BRING NEW THEORY ON SMELLING

That the sensation of smell is the result of impulses sent out from the smelling organ, as from a radio transmitter, at extremely high frequencies, has been revealed by investigations under way at Yale University in New Haven, Conn. It was formerly thought that "smell" was the result of chemical reactions set up within the organ.

This revolutionary discovery puts smell into the realm of radiation physics. The theory has been developed through highly scientific researches made with the common cockroach and the bee. The high frequency impulses emanating like one-way radar waves from the nose organ fall within a definite range. Substances falling outside this range—such as, presumably, carbon monoxide—cannot be smelled by human beings.

The new concept of smelling is based on the idea that heat moves toward a source of coolness. The nose organ is "hot"; the odorous gas is "cool." As the sense organ loses heat the gas gains it. When a balance is reached we become insensitive to the odor.

Further research is expected to establish a smell spectrum in which the 4000 to 6000 odors detected by the human nose can be plotted. Thus the guesswork can be removed from smelling.—Michigan State Medical Society.

## PHYSICIANS NUMBER 199,755, A. M. A. BUREAU FINDS

The Bureau of Medical Economic Research of the American Medical Association estimates that there were 199,755 physicians in the United States as of June 1, 1948.

Frank G. Dickinson, Ph.D., director of the Bureau, says in an article which appears in the August 21 issue of *The Journal of the American Medical Association* that this number is 17 per cent greater than the 170,163 physicians shown in the 1940 A. M. A. Directory. The population of the United States has increased only 12 per cent since 1940, he points out.

## SOUTHERN MEDICAL ASSOCIATION MEETS IN MIAMI OCTOBER 25-28

W. A. SELMAN, M.D.
*Atlanta*
*Councilor from Georgia*

Are you a member of the Southern Medical Association? If so, you have on your desk each month original medical articles written by Southern doctors, particularly articles about diseases prevalent in the South. If you are not a member, you are missing a monthly round-table discussion of the very diseases that may puzzle you every day. Not only are you missing all of this, but the pages of the Southern Medical Journal are open to you and solicit your articles on medical and surgical subjects, and gives publicity to your case reports.

The Southern Medical Association is exceeded in membership only by the American Medical Association, and the character of the contents of its journal is second to none. This year the annual meeting of the Association will be held in Miami, Florida, October 25-28, inclusive. Arrangements have been made for all meetings to be held under one roof, with all technical and scientific exhibits in the same building.

I trust every physician in Georgia, who is not already a member of this great organization, will sit down now and mail a check for $5.00 to the Southern Medical Association, Empire Building, Birmingham, Alabama. This amount covers your membership dues and subscription to The Journal for one year.

Those of you who anticipate attending the Miami session of the Association should contact the Hotel McAllister, Miami, Florida, the official headquarters for this year's meeting, or the Hotel Committee, care Miami Convention Bureau, 320 Fifth Street, Northeast, Miami 32, Florida.

# PRESIDENT'S PAGE

## HOW CAN GEORGIA'S HEALTH BE IMPROVED?

A review of the history of the Medical Association of Georgia reveals a record of continued effort toward improving Georgia's health. Much of this effort has brought about a condition of good health and well-being among our citizens.

The advances in medical education, the strengthening of our medical schools, the better care of the sick by improving and modernizing our hospitals with the resultant facilities for the sound training of interns and residents, the excellent work of our State Health Department, a keener interest in training schools for nurses, the remarkable strides in diagnosis, therapy and surgical technic are some of the achievements for which the medical profession is justifiably proud.

These improvements did not happen overnight. Progress has been slow. Considerable effort has been expended throughout the years in matters of legislation designed to improve the health of our people. While not all legislation sponsored by the Medical Association of Georgia has been enacted into law, the record shows that by and large our efforts have been stimulating and encouraging. Experience with the General Assembly, year in and year out, reveals the fact that that body is sympathetic to any worthy appeal aimed at improving the health and welfare of the people of this State. Happily, too, practically every Governor of Georgia during the past two decades has supported the medical profession in its legislative efforts.

As we offer proposed bills to our Legislature we must be prepared to convince that body of our thoroughness of study and sincerity of purpose in asking enactment of new laws. With this attitude constantly in mind, I believe our progress in working for a more healthful Georgia is assured.

At the present time it is our good fortune to have a large number of prominent citizens of our State evidencing marked interest in Georgia's health. These people have held several meetings in recent months, and as a result of the initial meeting an organization known as the *Better Health Conference* was formed and is now functioning. This conference resulted from former President Steve Kenyon's vision and his sincere efforts in effectively presenting Georgia's health problems. Several committees are at work developing programs desired for the betterment of all the people of our State. Some of the subjects under consideration by the respective committees are:

1. Medical education. Intern training. Hospitals. Nurse training.
   a. Shortage of physicians, and their improper distribution.
   b. Shortage of hospital beds. Need for hospitals in various sections of the State.
   c. Shortage of registered nurses. Proposed legislation to permit training and licensing of practical nurses.
2. A plan for voluntary prepayment medical care. (This problem is being studied by the committee from the Medical Association of Georgia. The *Better Health Conference* offers any assistance it may be able to render).
3. A law requiring pre-marital physical (including serologic) examination of both men and women.
4. A better method of handling the mentally ill.

These and other pertinent matters will be discussed at the meeting of the *Better Health Conference* in Macon, Sept. 29-30, 1948. All members of the Medical Association of Georgia and interested lay citizens are invited to attend and participate in this statewide meeting. An open forum with both professional people and laymen as participants should be of mutual benefit.

Georgia's health can be improved if every interested physician, dentist, nurse and lay citizen will attend the Macon conference, if possible, and subsequently advise their friends and acquaintances of the General Assembly regarding the need for certain progressive legislation in Georgia.

Edgar H. Greene, M.D.

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

SEPTEMBER, 1948

## POINTS OUT NEED OF ROUTINE EXAMINATION FOR STOMACH CANCER

Routine examination with x-ray films is the only effective means for discovering the majority of stomach cancers at an early stage, according to Leo G. Rigler, M.D., of the department of radiology and physical therapy of the University of Minnesota, Minneapolis.

Writing in the August 21 issue of *The Journal of the American Medical Association*, Dr. Rigler points out that "the procedure is capable of discovering most of the tumors present, even if of extremely small size.

"The vast majority of persons coming to surgical treatment are in an advanced stage of the disease so that surgical treatment is impossible in a high percentage of the cases.

"Surgical cures of carcinoma of the stomach will continue to be infrequent unless the diagnosis is made before the development of any appreciable symptoms or physical signs," he observes.

As the incidence of the disease rises sharply after the age of 50, such an examination is especially desirable for persons over that age, Dr. Rigler says.

For practical use of the examination on a wide scale, the group to be examined should be chosen by age and results of a preliminary test for gastric acidity, according to Dr. Rigler. If all persons past 50 were given a triple histamine test and a gastric analysis, and those for whom the analysis indicated a low gastric acidity were examined with x-ray films, most cancers of the stomach could be discovered, he points out.

Use of the preliminary gastric analysis would reduce the number of persons to be examined to approximately 30 per cent of the age group, he indicates.

In a study made by Dr. Rigler of 544 persons over the age of 50 who showed no symptoms of the disease but whose gastric analyses showed either absence of hydrochloric acid or less than 30 units of free hydrochloric acid, three stomach cancers and 19 "presumably benign" stomach polyps were discovered by routine x-ray examination.

The study was made during 1946 and 1947 in cooperation with the department of surgery and the out-patient department of the University of Minnesota.

Routine x-ray examination of only persons who show such possible indications of stomach cancer as gastric ulcer, pernicious anemia, and stomach polyps is not a solution of the stomach cancer problem, Dr. Rigler says. A large number of stomach cancers would still exist in persons showing no symptoms, he believes.

Fluoroscopy or examination by x-rays without a preliminary gastric analysis would not be practical for routine examination on a large scale because of the expense and personnel which would be required, according to Dr. Rigler.

Photofluorography "might constitute a fairly adequate examination and would be time saving and relatively inexpensive," he says.

## ROCKY MOUNTAIN SPOTTED FEVER SEVERE IN EASTERN STATES

The prevalence, severity, and high mortality of Rocky Mountain spotted fever in the Eastern States are not generally appreciated, say two physicians of Winston-Salem, N. C.

Writing in the August 14 issue of *The Journal of the American Medical Association*, the physicians—W. M. Kelsey and G. T. Harrell of the departments of pediatrics and internal medicine of the Bowman Gray School of Medicine of Wake Forest College and the pediatric service of the North Carolina Baptist Hospital—point out the following statistics:

In 1936, 50 cases of the disease were reported in Virginia and 32 each in North Carolina and Maryland, with mortality rates of 13.9, 14.1, and 25 per cent respectively. In 1945 there were 99 cases reported in Virginia, 57 in North Carolina, and 47 in Maryland, with mortality rates of 20.1 per cent for Virginia and 31.7 per cent for North Carolina.

"It is probable that the actual incidence is much higher than the number of cases would suggest," they say.

Rocky Mountain spotted fever is a rickettsial disease—that is, it is caused by rickettsia, parasitic micro-organisms which are transferred to human beings by the bite of a wood tick or dog tick. It occurs most often in the spring and summer and among persons who work in the woods and fields.

Since only half the Rocky Mountain spotted fever patients treated by the two doctors remembered being bitten by a tick not long before the onset of the fever, contact with the tick required to produce the disease "may not be so long nor so intimate as is believed," the article emphasizes.

The incubation period, or time from the carrier tick bite to the onset of the disease, varies from one to eight days, say the doctors, and symptoms after the onset are high temperature, severe headaches, vomiting, and a rash.

Two types of specific therapy, hyperimmune rabbit serum and para-aminobenzoic acid, are

available, according to the doctors.

"In our experience," they report, "hyperimmune serum has not proved to be of great value; large doses of serum have not yet been given an adequate trial, however. The value of para-aminobenzoic acid in Rocky Mountain spotted fever has not been definitely determined."

## A. M. A. WARNS OF HEALTH HAZARDS IN USE OF PESTICIDES

The American Medical Association warned recently that development and use of new pesticides and herbicides have caused the chemical contamination of some foods, thereby creating serious public health hazards.

"Studies indicate that already many constituents of the American diet may be contaminated with materials of unknown toxicity used to destroy insect pests or weeds," says an editorial in the August 28 issue of *The Journal of the American Medical Association.*

"The insecticides," the editorial states, "include those materials which have been long in use such as lead arsenate, nicotine and fluorine compounds, and new materials, about which little is known, such as the organic phosphates, chlordan and many others, and DDT."

The Council on Foods and Nutrition of the American Medical Association states that the chemical contamination of foods with residues of these substances is but a part of the broader problem created by their wide use, for in addition to the danger from ingestion, the effects of inhalation and skin absorption must be determined.

The council in a separate article in The Journal says it recognizes the potential usefulness of newly-developed pesticides and herbicides, but at the same time it recognizes also the potential hazards to individual and public health of the unrestricted use of these products which are placed on the open market before they have been adequately studied and their toxicologic properties determined.

"It is obvious," the council says, "that controls must be placed on the sales and distribution of products of unknown or incompletely known toxicity. The time to establish controls, voluntarily or otherwise, is now, before possible tragic consequences occur."

The Council on Foods and Nutrition, in conjunction with the A. M. A. Council on Pharmacy and Chemistry, is planning a meeting sometime this fall with officials of the U. S. Department of Agriculture, the U. S. Food and Drug Administration, the U. S. Public Health Service, other governmental agencies and other organizations and agencies to consider the problem of food contamination with pesticides.

"The brands of new insecticides, fungicides, and herbicides—weed killers—now on the market or contemplated, number several thousand," The Journal editorial says, adding:

"Little is known about either the acute or chronic pathologic effects on man of these new pesticides. When pesticides are poisonous to insects they are usually poisonous to man. Their true value depends on a significant difference between the toxic effect on man and insects.

"Voluntary control by producers and distributors of these substances should be instituted immediately. If voluntary control proves to be inadequate for the protection of the public, suitable legislation must be considered and effective means of control promptly established. Prompt voluntary action by the industry is imperative.

"Even though added controls may impede the development of pesticides, there are essential precautions which must be taken in order to avoid the danger of mass poisoning, which might well offset the potential benefits of the new agents."

Dr. James R. Wilson, Chicago, secretary of the A. M. A. Council on Foods and Nutrition, said in commenting on The Journal editorial that some companies which manufacture these products have taken no responsibility, but have passed responsibility on to the buyer.

In studying the problem, the council found, for example, that one company promoted its insecticide with this note of caution: "Avoid inhalation of dust. Avoid contamination of foodstuffs. Seller makes no warranty of any kind, express or implied, concerning the use of this product. Buyer assumes all risk of use or handling, whether in accordance with directions or not."

Dr. Wilson urged housewives to wash all fruits and vegetables thoroughly before eating, suggesting also that home gardeners should carefully observe all available instructions.

## DRASTIC DIET REDUCES HIGH BLOOD PRESSURE

Laboratory experiment has confirmed wartime evidence that near-starvation benefits persons suffering from high blood pressure, say three scientists from the laboratory of physiological hygiene of the University of Minnesota, Minneapolis.

Writing in the August 28 issue of *The Journal of the American Medical Association*, Josef Brozek, Ph.D., Carleton B. Chapman, M.D., and Ancel Keys, Ph.D., report on the effects of near-starvation in Europe during World War II and in a study made at the University of Minnesota.

"Once instituted," the scientists warn, "the regimen must be followed carefully; modifications, particularly if sudden, may be dangerous."

They found that although semi-starvation diet reduces high blood pressure, the condition of the heart and circulatory system "may be extremely precarious" during the time of refeeding

and recovery. When refeeding is done too quickly, even persons who do not have high blood pressure before dieting may acquire it, they observe. If high blood pressure occurs or reoccurs while the heart and circulatory system are still in a condition of recovery, heart failure may result, they say.

Wartime experiences in Europe gave scientists much information about the results of semi-starvation which the article analyzes. During the period of severe food scarcity in Leningrad, from September 1941 to March 1942, Russian physicians discovered that a decrease in blood pressure was one of the characteristic symptoms of semi-starvation. And further, they noticed that blood pressure was reduced to a normal or nearly normal level in a large number of patients who had chronic hypertension.

Symptoms such as headaches and dizziness decreased or completely disappeared. There was also a decrease in heart disease. Similar observations have come from Holland and from concentration camps in France and Germany, the scientists say.

"In the two years following the famine in Leningrad, hypertension became a major medical problem," they report. "Particularly striking are the descriptions of an epidemic of hypertension and hypertensive cardiovascular disease which occurred following the lifting of the siege in 1943

"In April 1943, measurements of blood pressure were carried out on a large sample of the city population and on small samples from particular occupational groups. Some 10,000 'normal' persons were examined.

"It appears that the number of persons in whom symptoms of hypertension are likely to develop increased enormously during recovery from semi-starvation. In the group aged 20 to 39 there was approximately a four-fold increase in the period 1942-1943 as compared with the prewar incidence. In the group aged 40 to 49 the increase was about twofold, and in the group aged 50 or more it was threefold."

To test effects of near-starvation, scientists at the University of Minnesota placed 34 normal young men on a diet of less than 1,600 calories daily for six months. The average weight for the group fell nearly 24 per cent in the six months, and there were "striking decreases in blood pressure, pulse rate, and the size of the heart.

"These and other observations point unmistakably to a general depression of circulatory function in normal young men with vigorous limitation of food intake. There was no evidence at this time of increased venous pressure, dilatation of the heart, or difficulty in breathing," the article says.

However, when the food intake of 12 men was increased rapidly after 12 weeks of controlled rehabilitation, their blood pressure rose. "Findings indicate that the decidedly increased food intake, resulting in an increase of body weight and associated with a decided rise in the basal metabolism, placed a considerable strain on the cardiovasulcar system," the scientists point out.

## RESEARCHERS DESCRIBE ARTIFICIAL KIDNEY

An artificial kidney developed by three researchers of Toronto, Canada, is saving the lives of persons whose kidneys do not function or function improperly.

The three researchers—Gordon Murray, M.D., Edmund DeLorme, M.D., and Newell Thomas—describe the apparatus in the August 28 issue of *The Journal of the American Medical Association.*

When secretion of urine stops following blood transfusions, certain conditions in pregnancy or poisoning, they say, toxic substances accumulate in the blood. Physicians formerly have had little control over this condition, the researchers point out, and when it persists it is always fatal.

"It was with great satisfaction, therefore," the article continues, "that we were able to produce a machine which will reproduce the function of the kidney and will remove many, if not all, of the toxic substances that cause the fatal result."

The apparatus has been successfully used on patients and several days of treatment cause no ill effects, the researchers report.

The artificial kidney is the product of many years of work by these men, who began with attempts to transplant kidneys and to filter blood in animals. In its present form, they say, it operates by means of a cellulose membrane which filters the blood, separating large particles from small ones.

This membrane is placed in a chemical bath containing sodium chloride, other chlorides, sodium phosphate, sodium carbonate, and dextrose, the article explains. A pump removes blood from the large trunk vein of the body which provides circulation to the legs and passes it into a tube, through the membrane, and into the opposite vein of the flank.

As the blood of a patient circulates through this route, the toxic substances fall out through small openings of the membrane. Large molecules such as proteins and hormones are carried back into the blood stream.

The substances which are filtered out plus sugar and water escape rapidly into the surrounding bath where buffering takes place—a chemical process which prevents alterations in the solution which would be harmful to the patient. By changing the solution frequently, the rate of filtration can be kept at a comparatively high speed, the researchers say.

Provided that the blood, both in the patient

and as it enters the machine, is adequately treated with heparin, a drug which prevents clotting, the machine gives "no difficulty whatever," they observe.

Laboratory results point to further possible uses of the artificial kidney, the researchers indicate.

"Experimentally," they say, "we have demonstrated that when an animal is having a deficiency of oxygen a fairly large quantity of oxygen can be supplied by this machine. Moreover, the blood stream of the animal could be supplied with almost any desired quantity of sugar. There was evidence to suggest that various types of medication and treatment might be given for shock or severe burns."

## CHILDREN ATTAIN MATURITY DURING RANGE OF YEARS

Parents who think their adolescent children are not normal because they are larger or smaller than companions of the same age have little cause for worry, according to Joseph A. Johnston, M. D., Pediatrician-in-Chief of the Henry Ford Hospital, Detroit, Mich.

Writing in the August 28 issue of *The Journal of the American Medical Association*, Dr. Johnston points out that children attain maturity during a range of years and that each child has his own inherited "time schedule." For example, in a schoolroom of normal 13 year old girls, gains in height during the previous year may vary from one to four inches and gains in weight from six to 30 pounds, he says.

Diet of adolescent children, however, should cause concern, he points out. During the year when a child is growing rapidly he needs unusually large amounts of protein, calcium, and vitamin D, Dr. Johnston says.

These needs of the adolescent will be covered when the daily diet includes the items on the following list prepared by Dr. Johnston:

One quart of milk, one egg, one serving of cereal and three slices of bread, two large servings of meat, fish, or cheese, one serving of a simple dessert containing egg and milk, one serving of soup containing milk, and 800 units of vitamin D.

In the average youngster, Dr. Johnston found, instinct is a reliable guide to the amount of meat which should be eaten.

"The increase in tuberculosis in the adolescent years has been associated with some change which lowered resistance at this age. Observations lend further support to the need for supplying liberally the increased needs for protein, calcium, and vitamin D of this period of growth," he comments.

"The fact that the average obese adolescent is above average height, shows advanced bone age, and is in the advanced group intellectually, although retarded in his social and emotional maturation, are all sound arguments against attributing the excess weight to thyroid deficiency. The management of the obese child includes more than the attempt to limit his caloric intake: it involves an assessment of his emotional and social difficulties and the frank facing of the too frequently found overdependent relationship between parent and child."

## PENICILLIN NAMES BAFFLE DOCTORS

Trade names for penicillin are becoming so numerous and so confusing that even doctors cannot keep up with the terminology, according to an editorial in the July 17 issue of *The Journal of the American Medical Association.*

Doctors have to contend with such titles as Buffecillin, Duracillin, Poultrycillin, Dairycillin, Denticillin, Pen-Troche, and P. O. B., the editorial says.

*The Journal* protested editorially in 1946 against the multiple names for the product. "Now comes procaine penicillin with a variety of titles that fail to indicate the nature of the product and a number of other penicillins named with relation to the section of the body at which they are aimed."

The editorial, entitled "More Silly Names for Penicillin Products," follows in part:

"To select a rose from such a garden would require a botanist with more basic knowledge of the naming of plants than most physicians possess. Perhaps the next step will be numbers to correspond with certain entrances or exits of the human body; we may be talking about 'cillin No. 1' for the front and 'cillin No. 2' for the rear.

"In a previous editorial attention was called to the combination of the manufacturer's name with 'cillin'. Since there were almost 30 manufacturers, that offered almost 30 possibilities. Now the emphasis seems to be inclining toward the port of entry plus 'cillin'.

"The Council on Pharmacy and Chemistry in recent years has tried to be more than reasonable about the acceptance of fanciful names for widely used products of varying manufacture. Even the patience of the proverbial Job would be tried by contemplation of a list such as is here cited.

"In the previous editorial the editor offered 8 to 5 that doctors would not guess the nature of a product called 'Penioral'. The odds are improving. We now offer 5 to 1 on 'P. O. B.'"

## TETANUS—THE MYTH OF THE RUSTY NAIL

The old idea that a puncture wound from a rusty nail is the "cause" of tetanus, or lockjaw, is a misconception, the Educational Committee of the Illinois State Medical Society observes in a *health talk.* Tetanus may develop from almost any scratch or wound, if proper precautions are not taken.

The germ causing tetanus, identified more than 60 years ago, produces one of the most powerful poisons known. It is almost always present in soil contaminated by the body wastes of cattle, horses and other animals. The germ is thus a menace to children, farmers, gardeners, or others whose activities bring them into contact with such soil. However, many tetanus cases develop from injuries incurred elsewhere.

The *Clostridium tetani*, which causes tetanus, is what is called an anerobic germ. That means that it thrives in the absence of air. Thus, when it is introduced into tissue so wounded as to close it off from the air, and also is hard to clean, conditions are perfect for its

development. A puncture wound from a nail, or the wadding of a Fourth of July blank cartridge, is of that type. That explains the "rusty nail" idea from folklore.

The germ does not cause illness by a direct attack on tissue. Instead, it produces a toxin, or poison, which has a peculiar liking for nerve tissue. Symptoms are all due to its irritating effect on nerves. Thus there is at first some pain and twitching of muscles due to the nervous stimulation. Then come irritability, restlessness and chills. Then muscles begin to develop involuntary convulsions.

If the nerves controlling muscles of the jaw are affected, their contraction clamps the jaws tightly closed. Hence the term lockjaw. As the toxin extends its effects, major trunk muscles are involved and the back muscles in convulsion may pull the spine into a curve so that only head and feet touch the bed. The pain is excruciating. Meanwhile, however, the mind remains clear. Death is due, not to the poison directly, but to exhaustion, heart failure, or suffocation caused by spasm of the throat muscles. In untreated cases, it comes within about four days, but if the patient can be carried through the tenth day about 50 per cent recover.

With the discovery of tetanus toxoid in 1924, tetanus became a preventable disease. Children regularly under the care of a physician are given immunization doses, along with their preventive inoculations against other diseases such as diphtheria and whooping cough. Every child should have this protection, because the germ may contaminate any wound. Such tetanus "shots" are given routinely to the armed forces. Their value was evidenced in World War II, when only 11 known cases of the disease were reported, with four deaths, among 10,700,000 soldiers.

Treatment of tetanus is difficult. Antitoxin in large doses is the main reliance, with sedatives to control convulsions. Penicillin is also used now. Mortality is still high.

Tetanus may occur any time, but particularly in the summer months when so many persons are outdoors. Everyone who plans to be working in the soil or around animals should consult the family doctor for preventive "shots" of tetanus antitoxin.

If the skin is punctured, see your physician at once. In addition to administering the toxoid, he will open up the wound, remove any contamination, and apply antiseptics.

Tetanus is easier to prevent than cure. Everyone should be immunized. Take no chances. What you consider a minor injury, may, in reality, be the site of the tetanus germ.

## AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, INC.

A number of changes in board requirements and regulations were made at the annual meeting of the board held in Washington, D. C., May 16 to May 22, 1948. New bulletins are now available for distribution upon application and give details of all new regulations. These relate both to candidates, and to hospitals conducting residency services for training.

Foremost are the following:

1. The ruling that applicants must receive adequate training in both obstetrics and gynecology has been defined as meaning a minimum of six-months, full-time, in the branch of either obstetrics or gynecology relegated to a minor role in a candidate's training and preference for practice.

2. Acceptable preceptorship training is defined.

3. The present regulation requiring at least six months of practice in the specialty following the completion of an acceptable training period, has now been extended, effective December 31, 1949, to a requirement of two years post-training practice limited to the specialty.

4. Specific requirements for approval of hospital services for residency training are outlined.

5. Effective immediately, there will be no further temporary approvals of hospital services for residency training. It is planned that all hospitals holding any type of residency training approval will soon either be resurveyed or initially surveyed by the Council on Medical Education and Hospitals of the A. M. A. so that all future approvals, new or old, will be based entirely upon inspection following application. It is expected also that certain resurveys will result in withdrawal of present residency approval from institutions where the educational and training standards are not being maintained.

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States and Canada on February 4, 1949. Application may be made until November 1, 1948. Application forms and Bulletins are sent upon request made to the American Board of Obstetrics and Gynecology, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

## FIRST NATIONAL MEDICAL PUBLIC RELATIONS CONFERENCE SCHEDULED

A national medical public relations conference, first of its kind, which will tackle six common objectives facing the medical profession today is to be held in St. Louis on November 27. Dr. George F. Lull, secretary-manager of the American Medical Association announced the meeting recently which his office will sponsor.

"Shooting at Common Targets in Medical Public Relations" is the theme of the conference, to which will be invited public relations directors, executive secretaries charged with public relations duties and public relations committee chairmen from each of the forty-eight state medical societies.

Featured for luncheon and dinner talks will be noted and qualified speakers on the following topics: "The Public Speaks on Health", "What Public Relations Did for Us" and "Yes, the Profession Needs PR."

At the workshop session which will be run in the afternoon from two to five o'clock, carefully-selected discussion leaders from the state societies will grapple with these six major social issues facing the medical profession: selling the need of public relations to state medical society members, encouraging wider use of medical pre-payment plans, setting up workable systems for handling night calls, the rebate problem, developing good-will with labor, farm, industrial and co-op groups, and cooperating with health agencies.

The conference will immediately precede the annual secretaries-editors meeting, which is being held in conjunction with the annual Interim Session of the American Medical Association, November 28 to December 3.

Dr. Lull declared that the planning and guiding of the conference would be handled by Lawrence W. Rember, William Doscher and John Bach of the Association's public relations staff.

"Question and answer periods will follow each workshop topical presentation," said Lull "which will enable all those attending to find the best refined answers to common medical public relations problems. We'll get the greatest possible value, because the speakers chosen for the panel have worked out case-history solutions on the firing line of their own state and county society experience."

About 100 representatives of state societies are expected to attend the sessions in St. Louis.

## POST-GRADUATE SEMINAR AT EMORY

A post-graduate seminar will be held at Emory University School of Medicine October 11 through 15. Note program in this JOURNAL, and make your reservations now.

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

### AUXILIARY NEWS

At the 1948 State Conference of the Executive Board of the Woman's Auxiliary, held in Macon August 17, Mrs. Sam Anderson, president, introduced the Advisory Council, Dr. C. H. Richardson, Sr., Macon, chairman; Dr. Enoch Calloway, LaGrange. Dr. Bruce Schaefer, Toccoa, Dr. Sam Anderson, Milledgeville, Dr. Shelley Davis, Atlanta, and Dr. Olin Cofer, Atlanta. She then presented her theme as "Learn, Think and Act", with the following objectives:

LEARN:

1. Learn the aims and ideals of the Medical Auxiliary and its method of organization.
2. Be informed as to the duties and responsibilities of an active Auxiliary member.
3. Become informed about the platforms of one's own County Medical Society, District Medical Society, State Medical Association, and American Medical Association.
4. Enlighten ourselves about the Principles of Medical Ethics, so we as wives of doctors can better perform our duties in the field of Public Relations.
5. Familiarize ourselves as to what lay organizations are doing in Health.
6. Analyze plans that furnish medical care to those members in your community who are unable to meet the financial demands for such care.
7. Study the various legislative bills that come before the State and National legislatures.
8. Become informed on the "Current Problems of Organized Medicine" as they exist in local, state, nation, and the world. A few of the problems are maladjustments, socialized medicine, distribution of doctors, over-specialization, high cost of medical care, shortages of nurses, etc.
9. Promote the 10-POINT HEALTH PROGRAM of the American Medical Association, which includes the following:

1. Nutrition, Housing, Clothing and Recreation.
2. Preventive Medicine—Health Departments.
3. Prenatal Care—Childbirth.
4. Infant Welfare—Child Care.
5. Hospitals—Health and Diagnostic Centers.
6. Voluntary Prepayment Plans for Hospital and Medical Care.
7. Veterans Needs for Hospital and Medical Care.
8. Research for Advancement of Medical Care.
9. Volunteer Health Agencies—Philanthropic Funds.
10. Health Education in Prevention of Diseases.

THINK:

1. Think about the Social and Health conditions and services of your community, how the most effective use of available community resources can be utilized.
2. Let us reflect and remember the doctors on March 30.
3. How can the Woman's Auxiliary be of the most value to the public and medical profession?
4. Conceive ways and means the Auxiliary can improve better relationship of the public to the medical profession.
5. Meditate and compile interesting accomplishments of physicians in your county, namely: Research in the Romance of Medicine.

ACT:

1. Each member acts by regular attendance at all Auxiliary meetings, and prompt payment of dues.
2. Sponsoring and subscribing to *Hygeia* magazine.
3. Reading the Auxiliary pages in *The Journal* of the Medical Association of Georgia.
4. Reading the National Auxiliary Bulletin.
5. Sending news activities of the County Auxiliaries to the State Press Chairman.
6. Cooperating with the State Scrapbook Chairman by sending her newspaper clippings pertaining to the organization. Competing for the Mrs. J. Bonar White and Scrapbook Awards.
7. Contributing to Student Loan Fund.
8. Helping the Archives Chairman collect records and data.
9. Compiling the material for and writing the history of one's Auxiliary.
10. Competing for the Mrs. James N. Brawner Trophy, and the Achievement Award.
11. Accepting the Chairmanship of Health and Public Welfare in other organizations.
12. Promoting Nurse recruitment.
13. Registering and voting.
14. Actively participating in all endeavors of the Auxiliary.

The objectives as stated were followed by hearty approval and report of the Advisory Council in which they urged the continued cooperation of the Auxiliary in the Association's plans.

A lovely luncheon was served at the Sidney Lanier Home, after which the board reassembled for a short afternoon conference.

MRS. CLIFTON G. KEMPER,
State Press and Pub. Chm.

## EMORY'S POST-GRADUATE COURSE

Emory University School of Medicine, in cooperation with the Medical Association of Georgia, announces a Postgraduate Course in Medicine and Surgery for General Practitioners, October 11 through 15, 1948.

The course is designed to present current ideas concerning the diagnostic and therapeutic problems of general practice. The course can also be used in meeting part of the requirements for membership in the American Academy of General Practice. Enrolment limited. Registration fee $10.00.

The following program will be given:

MONDAY, OCTOBER 11

9:00-10:00 Heart Failure—Dr. Arthur Merrill.
10:00-10:30 Congenital Heart Disease—Dr. Bruce Logue.
10:30-11:00 Coronary Artery Disease—Dr. James Warren.
*Intermission*
11:15-11:45 Cardiac Arrythmias—Dr. Robert Grant.
11:45-12:45 Discussion Period—Heart Diseases.
2:00- 3:00 Principles in the Treatment of Anemia—Dr. Charles Huguley.
*Intermission*
3:15- 3:45 Management of Multiple Complaints without Physical Findings—Dr. Hugh Wood.
3:45- 4:15 Etiology of Convulsions in Infancy and Childhood—Dr. Roger Dickson.

TUESDAY, OCTOBER 12

9:00- 9:30 Circulatory Disorders of the Extremities—Dr. Frederick Cooper.
9:30-10:00 Thrombo-Embolic Disease—Dr. Charles Stone.
10:00-10:30 Anticoagulant Therapy—Dr. David James.
*Intermission*
10:45-11:15 Office Management of Diabetic Patients—Dr. Harvey Hamff.
11:15-11:45 Complications of Diabetes—Dr. James E. Paullin.
11:45-12:45 Clinico-Pathologic Conference—Dr. James E. Paullin and Dr. Walter Sheldon.
2:00- 3:00 Antibiotics and Chemical Agents in the Treatment of Infections—Dr. Paul Beeson and Dr. William Friedewald.
3:15- 3:45 Hypertension—Dr. James Warren.
3:45- 4:15 Thyrotoxicosis—Dr. Arthur Codington.

WEDNESDAY, OCTOBER 13

9:00- 9:30 Diarrhea of Infancy and Childhood—Dr. Joseph Patterson.
9:30-10:00 Peptic Ulcer—Dr. Ebert Van Buren.
10:00-10:30 Chronic Liver Disease—Dr. David James.
*Intermission*
10:45-11:15 Cancer of the Stomach and Colon—Dr. Lon Grove.
11:15-11:45 Management of Gastro-intestinal Hemorrhage—Dr. Ira Ferguson.
11:45-12:15 Acute Abdominal Pain—Dr. John Martin.
12:15-12:45 Discussion Period—Gastro-intestinal Diseases.
2:00- 2:30 The Modern Treatment of Syphilis—Dr. Albert Heyman.
2:30- 3:00 The Diagnosis and Treatment of Peripheral Nerve Injuries.
3:15- 3:45 The Immediate Treatment of Fractures—Dr. Robert Kelly.
3:45- 4:15 Sinus Disease—Dr. Taylor Burgess.

THURSDAY, OCTOBER 14

9:00- 9:30 Bronchiectasis—Dr. Harry Price.
9:30-10:00 Pulmonary Tuberculosis—Dr. Levering Neely.
10:00-10:30 Cancer of the Lung—Dr. Osler Abbott.
*Intermission*
10:45-11:15 Advances in Nutrition in Medicine and Surgery—Dr. Arthur Merrill.
11:15-11:45 Rehabilitation of the Paralytic Patient—Dr. Robert Bennett.
11:45-12:45 Chronic Arthritis—Dr. Max Michael.
2:00- 2:30 Cancer of the Lip, Mouth and Tongue—Dr. Robert Brown.
2:30- 3:00 Cancer of the Female Genitalia—Dr. John Denton.
3:15- 3:45 Cancer of the Breast—Dr. Calvin Stewart
3:45- 4:15 The Management of Terminal Cancer Patients—Dr. Hugh Wood.

FRIDAY, OCTOBER 15

9:00- 9:30 General Principles in the Management of Dermatologic Patients—Dr. Herbert Alden.
9:30-10:00 Newer Methods of Immunizations—Dr. Richard Blumberg.
10:00-10:30 Fever in the Newborn—Dr. Hines Roberts.
*Intermission*
10:45-11:15 Useful Office Laboratory Procedures—Dr. Elbert Agnor.
11:15-11:45 Acute Anterior Poliomyelitis—Dr. William Friedewald.
11:45-12:15 Diagnosis of Obscure Fever—Dr. Paul Beeson.
12:15-12:45 Nose Bleed—Dr. William Hathcock.
2:00- 2:30 Antepartum and Postpartum Hemorrhage—Dr. Charles Upshaw.
2:30- 3:00 Clinical Endocrinology in Gynecology—Dr. John Cross.
3:15- 3:45 Office Gynecology—Dr. George Williams.
3:45- 4:15 Abortions and Premature Labor—Dr. Rudolph Bartholomew.

## SPEAKERS FROM THE FACULTY OF THE SCHOOL OF MEDICINE

OSLER A. ABBOTT, Assistant Professor Clinical Surgery (Thoracic).
ELBERT B. AGNOR, Assistant in Medicine.
HERBERT S. ALDEN, Assistant Professor of Clinical Medicine (Dermatology).
RUDOLPH A. BARTHOLOMEW, Professor of Clinical Obstetrics.
PAUL B. BEESON, Professor of Medicine, Chairman of the Department; Associate Professor of Bacteriology.
ROBERT L. BENNETT, Professor of Physical Medicine, Chairman of the Department.
RICHARD W. BLUMBERG, Associate in Pediatrics.
ROBERT L. BROWN, Associate in Surgery (Neoplastic Diseases).
TAYLOR S. BURGESS, Assistant Professor of Clinical Otology and Rhinolaryngology.
ARTHUR CODINGTON, Assistant in Medicine.
FREDERICK W. COOPER, Assistant Professor of Surgery.
JOHN B. CROSS, Assistant Professor of Clinical Obstetrics and Gynecology, Acting Chairman of the Department.
JOHN F. DENTON, Professor Emeritus of Clinical Gynecology.
ROGER W. DICKSON, Professor of Pediatrics, Acting Chairman of the Department.
IRA A. FERGUSON, Associate Professor of Clinical Surgery.
EDGAR F. FINCHER, Assistant Professor of Clinical Surgery (Neuro).
WILLIAM F. FRIEDEWALD, Professor of Bacteriology and Immunology, Chairman of the Department; Associate Professor of Medicine.
ROBERT P. GRANT, Instructor in Medicine; Instructor in Physiology.
LON W. GROVE, Associate Professor of Clinical Surgery.
L. HARVEY HAMFF, Instructor in Medicine.
WILLIAM C. HATHCOCK, Instructor in Clinical Otology and Rhinolaryngology.
ALBERT HEYMAN, Associate in Medicine.
CHARLES M. HUGULEY, Instructor in Medicine.
DAVID F. JAMES, Associate in Medicine; Instructor in Physiology.
ROBERT P. KELLY, Associate Professor of Surgery (Orthopedics), Chairman of Section of Orthopedics.

R. BRUCE LOGUE, Associate in Medicine.
JOHN D. MARTIN, Associate Professor of Surgery.
ARTHUR J. MERRILL, Associate Professor of Medicine.
MAX MICHAEL, Associate in Medicine; Chief of Medical Service, Lawson Veterans Hospital.
F. LEVERING NEELY, Assistant in Medicine.
JOSEPH H. PATTERSON, Associate in Pediatrics.
JAMES E. PAULLIN, Professor of Clinical Medicine.
HARRY J. PRICE, Assistant in Medicine.
M. HINES ROBERTS, Professor of Clinical Pediatrics.
WALTER H. SHELDON, Associate Professor of Pathology.
CALVIN B. STEWART, Associate in Surgery (Neoplastic Diseases).
CHARLES F. STONE, Instructor in Medicine.
EBERT VAN BUREN, Assistant Professor of Clinical Medicine.
CHARLES B. UPSHAW, Associate Professor of Clinical Obstetrics.
JAMES V. WARREN, Professor of Physiology, Chairman of the Department; Associate Professor of Medicine.
GEORGE A. WILLIAMS, Associate in Obstetrics and Gynecology.
R. HUGH WOOD, Professor of Clinical Medicine; Dean of the Medical School.

## GENERAL PRACTITIONER'S AWARD

The House of Delegates of the American Medical Association at its Chicago session in June adopted a resolution which outlines a definite method for selecting each year the recipient of the Association's General Practitioner's Award. The resolution, which is completely self-explanatory, reads as follows:

Whereas, The American Medical Association has adopted the practice of honoring one general practitioner as outstanding in the United States each year at the Interim Session of the House of Delegates; and

Whereas, The first award was given last January at the meeting in Cleveland and was widely acclaimed throughout the country, though the process of selection was marred by confusion and misunderstanding; and

Whereas, It is at the local levels that many lay groups and individuals can best learn the importance of preserving the American way of life, including the continuance of the practice of medicine as a private enterprise, and the designation of such outstanding general practitioners can have great value in calling public attention to that importance; and

Whereas, It is desirable that some definite procedure should be established by which the selection of the said outstanding general practitioner originate at the county society level and proceed through state organizations so that local or state groups and individuals may pay tribute to the family physician of their choice; now, therefore, be it

RESOLVED, That the House of Delegates of the American Medical Association approve and set in operation a plan whereby:

(1) Each county medical society shall be urged to name the candidate of its choice as the outstanding general practitioner for the year within its jurisdiction, basing its selection on nominations and recommendations from any responsible source, lay or professional.

(2) The name of each candidate so chosen by a county medical society, with all pertinent data, including recommendations of lay groups and individuals, shall be submitted by the county medical society to the state medical society of which it is a component part.

(3) Each state medical society, through whatever agency each may designate, shall select from among the candidates submitted by its component county medical societies one name to be declared the outstanding general practitioner within the state.

(4) The candidate so selected at the state level shall be the sole candidate from that state, and his or her name, with all pertinent supporting data, shall be submitted to the Board of Trustees of the American Medical Association.

(5) The Board of Trustees shall select from the names submitted by state societies the names of three persons, these names to be submitted in turn to this House of Delegates, which shall select one name to be declared the outstanding general practitioner of the United States for the year.

(6) Any state medical society desiring to do so may establish and confer a suitable award with fitting public ceremony on the physician it has named as the outstanding general practitioner of that state for the year.

A nomination submitted by your constituent association should reach this office for transmissal to the Board of Trustees *not later than November 15, 1948.*

GEORGE F. LULL, M.D.,
Secretary and General Manager
American Medical Association
535 North Dearborn St., Chicago.

## NEWS ITEMS

Dr. J. J. Allen, Summerville, recently returned from his vacation and has assumed duties at the Riegel Community Hospital, Trion.

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Dr. Joe J. Arrendale, Cornelia, recently opened the Arrendale Hospital, Cornelia. The institution is a 15-bed, 4 bassinet, private hospital equipped for general surgery, obstetrics, gynecology, ear, nose and throat, orthopedics, contagious diseases, pediatrics, x-ray and fluoroscopy, physiotherapy and electrocardiograph, and medical cases. The obstetric unit is isolated from the rest of the hospital, as is the kitchen and dining facilities. A staff of five registered nurses and three nurses' aides will be on duty at all times. The professional staff is open to all branches of medicine except obstetrics and surgery, which will be retained by Dr. Arrendale.

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Dr. G. J. Austin, Jr., formerly of Moultrie, announces the opening of his office at Valdosta. Practice limited to pediatrics. Dr. Austin graduated from the University of Georgia School of Medicine, Augusta, and then spent one year internship at Charity Hospital, New Orleans. He entered the Medical Corps of the U. S. Army in 1942 and was attached to General Patton's Third Army in Europe. After his discharge in 1946 he returned to Charity Hospital, New Orleans, where he spent two years as resident in pediatrics.

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Dr. Edward L. Askren, Jr., Atlanta, announces the removal of his offices for the practice of ophthalomology from 1010 West Peachtree St., N. W., to Suite 1101 First National Bank Building, Atlanta.

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Dr. A. J. Ayers, Atlanta, announces the association of Dr. John O. Ellis in the practice of clinical pathology and radiology at 111 Medical Arts Building, Atlanta.

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*An Appreciated Service*: Dr. Richard Binion has resigned from the Board of Health of the County and from the Democratic Executive Committee, two offices he has filled most admirably. In fulfilling the duties of these offices, Dr. Binion has served the best interests of the people at all times and he deserves the appreciation of the citizens of our county for this public service.

Dr. Howard Cary, a young physician and veteran of the recent war, has been placed on the Board of Health to succeed Dr. Binion. He will give the board energy and an appreciation of the responsibilities that come with public service. We believe the Grand Jury has made a wise choice.—Editorial page of the *Milledgeville Recorder*, August 5.

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The Bibb County Medical Society held its meeting at Ridley Hall, Macon, August 3. Program—"The

Diarrheas". Dr. C. H. Richardson, Jr., Macon. Dr. A. M. Phillips, secretary.

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Dr. George C. Blanchard, a native of Augusta, announces his association with Dr. Richard B. Weeks, Southern Finance Building, Augusta. Practice limited to general surgery. Dr. Blanchard graduated from Cornell University Medical College, New York City, in 1942, and was an exchange student doing special study at the University of Havana, Havana, Cuba. He interned at the Bellevue Hospital in New York City and served as assistant resident there before his entry into the U. S. Army Medical Corps. During the war he was a medical officer with ground forces and for two years served in the European Theater during the campaigns there. Since his release from the Army in 1945, Dr. Blanchard has received training on the surgical house staffs at Johns Hopkins Hospital, Baltimore and at the University Hospital, Augusta.

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Dr. Paul L. Bradley, Montezuma, announces his association with Drs. Thomas M. Adams and J. Fred Adams in the Macon County Clinic, Montezuma. Dr. Bradley served with the Medical Corps of the U. S. Army during the war and since that time has been connected with Grady Memorial Hospital, Atlanta.

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Dr. Robert Brown, Atlanta, of the staff of the Ponce de Leon Infirmary, recently completed a bronchoscopic course at the University of Pennsylvania School of Medicine in Philadelphia.

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The Georgia Medical Society held its meeting at the society's hall, 612 Drayton Street, Savannah, August 10. Dr. Monroe J. Epting, president, invited Dr. Ivan W. Brown, Jr., assistant technical director of the Red Cross National Blood program, to explain the technical aspects of operating a blood bank. Dr. Brown described the set-up of blood banks by the Red Cross National program as follows: First, the Red Cross must be requested to establish such centers by the local medical society or similar organization. There must be a need for it in the area. A blood program committee for the region must then be set up, with a medical advisory committee, the chairman of which is an ex-officio member of the blood program committee. The local Red Cross must supply an adequate building for the purpose and pay the manager and clerical help of the center. All the rest of the cost, including a mobile blood unit to travel over the region to be served and collect blood from donors, as well as the expense of equipping the center, is borne by the National Red Cross. In all, the National Red Cross pays about 85 per cent of the cost of such a project, and the local chapter the remainder. "This is not an attempt at socialized medicine, or control from above," Dr. Brown declared. "After the blood is collected at the center the local medical sponsors say which hospitals shall have a share of it and how much. The use of the term 'free' blood program is also deplored. The National Red Cross asks centers participating in the program to make no charge for the blood itself, but charges may be made by hospitals for typing patients' blood and by doctors for administrating it." Members of the Georgia Medical Society voted to ask the local chapter of the Red Cross to establish a blood bank in Savannah to supply the Savannah area, after hearing Dr. Brown. A local medical advisory committee was appointed by Dr. Epting to work with the local Red Cross chapter in planning the establishment of a blood bank. They are: Dr. W. O. Bedingfield, chairman, Dr. J. H. Pinholster, Dr. Jules Victor, Dr. A. Leon Holoman and Dr. Thomas A. McGoldrick, Jr. Members of the First District Medical Society also attended the meeting. Dr. W. O. Bedingfield, Savannah, is president of the First District Medical Society.

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Dr. J. McKenzie Brown, Albany, anesthesiologist at Phoebe Putney Hospital, recently told the Albany Rotary Club how advances in the sciences of anesthesiology have ended a major part of pain involved in today's surgical operations, and given a new tool for treatment of some diseases. Dr. Brown declared that most surgical patients who die do so from anesthesia, not the operation itself. Dangers from this trouble locally have been alleviated with the post-operative recovery room which has been established at the Phoebe Putney Hospital.

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The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, August 5. Program: Dr. George A. Williams, moderator; "Proctological Examination and Evaluation of Findings", Dr. Marion C. Pruitt; "Management of Abortions", Dr. W. Vernon Skiles; and "Common Errors in the Management of Diabetes", Dr. Christopher J. McLoughlin.

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Dr. Otha K. Coleman, Vienna, announces the opening of his office in the Forbes Building on Orange Street, Vienna, for the practice of medicine. Dr. Coleman graduated from the University of Georgia School of Medicine, Augusta. He completed his internship at the Macon City Hospital, Macon. Mrs. Coleman, the former Miss Barbara Ann Cato of Augusta, a graduate of the University of Georgia School of Nursing, will be associated with him.

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Dr. H. Gordon Davis, Jr., former Lumpkin physician and a native of Sylvester, announces the opening of his office on Liberty Avenue, Sylvester, for the practice of medicine.

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Dr. Charlotte Donlan, Savannah, director of radiotherapy department, Savannah Tumor Clinic, recently addressed the Kiwanis Club at their weekly luncheon meeting at the Hotel DeSoto, stressing the lesions of cancer common to the male animal, and cancer of the skin, lip, mouth, and prostate. Dr. Donlan's talk was followed by a film entitled, "Battle Against Cancer," sponsored by the American Cancer Society.

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Dr. Walter F. Edmundson, a senior assistant surgeon with the U. S. Public Health Research Laboratory at Staten Island, N. Y., is the new medical director of the Alto Medical Center, Alto. Dr. Leon S. Saler, former medical director, is at the U. S. Marine Hospital, New Orleans.

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Dr. W. G. Elliott, Cuthbert, recently returned from Chicago where he attended the Cook County Graduate School of Medicine, taking the course in heart diseases and electrocardiography given by Dr. C. C. Maher and his associates, Chicago.

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Dr. G. H. Folsom, popular physician of Lakeland, was honored by his children and grandchildren upon the event of his 71st birthday, July 26. Dr. Folsom received many tokens of affection in honor of his birthday, and the best wishes for many more years of continued service to the community and happiness for himself go out from friends throughout Lakeland and Lanier County. Congratulations Dr. Folsom!

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Dr. Harriet E. Gillette, Atlanta, has been named medical director of the Crippled Children League of Georgia, and of Aidmore. Announcement of the appointment coincided with a release from Chicago citing Dr. Gillette as the first person to receive a national scholarship for the study of cerebral palsy. Awarded a fellowship by the National Foundation for Infantile Paralysis, she specialized in physical medicine at Warm Springs for a year, and then devoted six months to research at Emory University School of Medicine, Atlanta.

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Dr. G. W. Goldenstar, a native of Ridgeland, S. C., has opened offices at 106 East Jones Street, Savannah, for the practice of medicine, specializing in treatment of the eye. Dr. Goldenstar graduated from Tulane

University of Louisiana School of Medicine, New Orleans, in 1941. From July 1941 until June 1942, he served as house physician at Mercy Hospital, Pittsburgh, Pa. Since the war he has had a residency at the Eye, Ear, Nose and Throat Hospital in New Orleans.

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The Fulton County Medical Society held its semi-monthly meeting at the Academy of Medicine, Atlanta, August 19. Scientific meeting: "Symposium on Peptic Ulcers", Dr. Charles E. Dowman, moderator; "Symptoms and Diagnosis", Dr. J. Frank Harris; "Medical Management", Dr. McClaren Johnson; "Surgical Management", Dr. W. S. Dorough.

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Dr. Harold W. Goldin, Rockmart, announces his association with his father, Dr. R. B. Goldin, in the Smith-Lockwood Drug Store Building, Rockmart, for the practice of medicine. Dr. Goldin graduated from the University of Georgia School of Medicine, Augusta, in 1947, receiving top honors among his graduating class. Since that time he has served as an intern at the Medical College of Virginia, Richmond.

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Dr. J. R. Jones has completed his internship at Roper Hospital, Charleston, S. C., and announces his association with Dr. L. A. Bailey at Scott Hospital, Milledgeville. Dr. Jones is a graduate of the University of Georgia School of Medicine, Augusta.

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Dr. O. D. Lennard, Tennille, physician and civic leader was elected president of the Tennille Rotary Club at a recent meeting of the club held at the Tennille Hotel.

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The Georgia Baptist Hospital medical staff held its monthly meeting in the Nurses' Home dining room, Atlanta, August 17. Dr. Wm. G. Hamm, secretary, announced an interesting program was presented to the members of the staff.

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Dr. Louis K. Levy, Atlanta, announces the opening of his offices at 1010 West Peachtree St., N. W., Atlanta. Practice limited to internal medicine and cardiology.

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Dr. John Tyler Mauldin, Atlanta, announces the opening of his office for the practice of general surgery at 104 Ponce de Leon Avenue, N. E., Atlanta.

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Dr. Joseph D. McElroy, Atlanta, announces the removal of his office to 153 Doctors Building, North Building, 490 Peachtree Street, N. E., Atlanta. Practice limited to neuropsychiatry.

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Dr. Tracy Middlebrooks, Perry, who has been associated in the practice of medicine with Dr. J. L. Gallemore, Perry, for the last several months, has become a resident physician at the University Hospital, Augusta, and will continue his studies in internal medicine.

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Dr. John Gordon Morrow, a former Hahira resident, announces the opening of his office on Lawson Street, Hahira, for the practice of medicine.

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Dr. Edward J. Muldoon, formerly of Akron, Ohio, announces the opening of his office in the General Tyler Building, West Point. Practice limited to pediatrics. Dr. Muldoon graduated from the University of Pennsylvania School of Medicine, Philadelphia. He served in the U. S. Navy for four years, two of which were spent overseas. Since his return he has had a year of post-graduate work at the University of Pennsylvania School of Medicine, Philadelphia.

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Dr. W. H. Perkinson, Marietta, was named chairman of the baby clinic advisory committee to work with the Marietta Junior League. Dr. Earl Benson and Dr. L. L. Welch were appointed to serve with Dr. Perkinson. Dr. Walter Crawley, president of the Cobb County Medical Society, appointed the committee to work with the Junior League. The committee will advise the League in selecting a location and equipment. The plan was approved by the Cobb County Medical Society.

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Dr. Lum G. Neal, Jr., Cleveland, announces his association with his father, Dr. Lum G. Neal, Cleveland. Practice limited to medicine and surgery. Dr. Neal graduated from the University of Georgia School of Medicine, Augusta, in 1947. He interned at the Macon Hospital, Macon.

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Dr. John H. Ridley, Atlanta, announces the opening of offices at 1111 Medical Arts Building, Atlanta, in association with Dr. Floyd W. McRae. Practice limited to gynecology and female urology.

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Dr. R. A. Schanze, formerly of Louisville, Ky., and Homerville, announces the opening of his offices in the Hotel Koppel, Homerville, for the practice of medicine and surgery. Dr. Schanze was formerly associated with the late Dr. H. G. Huey at Huey Hospital, Homerville. His many friends and patients welcome him back to Homerville.

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The South Atlantic Association of Obstetricians and Gynecologists announces the establishment of "The Foundation Prize." Authors of papers on obstetric and gynecologic subjects desiring to compete for the prize may obtain information from Dr. E. D. Colvin, secretary-treasurer, 1259 Clifton Road, N. E., Atlanta, Georgia.

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Dr. Derrell C. Sirmons, Dahlonega, announces the association of Dr. Bryan Redd, Jr., in the practice of medicine at Dahlonega.

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Dr. S. C. Rutland, LaGrange, health officer of the West Central Region, sponsored a regional nursing and clerical conference covering 26 counties, held at the regional headquarters, Macon, July 15. Miss Vera Mingledorff, consultant nurse for the district, presided. Speakers included Miss Hannah Mitchell, maternal child hygiene consultant of the Georgia Department of Public Health, and W. W. Weir, public health engineer of the Georgia Department of Public Health. Approximately 60 nurses and clerks attended.

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Dr. W. L. Shepeard, formerly of McAlpin and Galveston, Texas, recently joined the faculty of the University of Georgia School of Medicine, Augusta, as professor of clinical pathology. He is also serving as director of the clinical laboratory at University Hospital, Augusta.

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Dr. J. M. Snelling, Jr., Ashburn, has closed his medical offices preparatory to going to Lowell General Hospital, Lowell, Mass., where he will serve as resident physician, and take further training in surgery. Dr. Snelling went to Ashburn eighteen months ago following his discharge from the U. S. Navy, when Ashburn needed a physician. Ashburn now needs two physicians.

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The Southern Pediatric Seminar, at Saluda, N. C., recently closed its 28th Annual Session of post-graduate summer courses devoted to "Better Babies in the South". Georgia physicians on the faculty were: Dr. Lee Bivings, Dr. William Littell Funkhouser, Dr. Hines Roberts, and Dr. J. K. Fancher, all of Atlanta. Also Dr. Philip Anthony Mulherin of Augusta. Other pediatricians attending were Drs. V. H. Bennett, Gay; J. J. Blum, Jr., Warner Robins; R. E. Carpenter, Hamilton; J. B. Crawford, Barnesville; J. J. Croley, LaFayette; W. M. Flanagan, Waycross; Jay Goldstein, Warner Robins; J. H. Grubbs, Molena; R. L. Guest, Augusta; D. B. Harrell, Tifton; H. P. Harrell, Augusta; M. M. Head, Zebulon; B. L. Helton, Sandersville; W. R. Lowe, Midville; W. C. McCarver, Vidette; E.

T. Rainey, Buena Vista; J. R. Turner, LaGrange; C. W. Twitty, Newton and C. B. Welch, Attapulgus.

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Dr. James Mack Sutton, Jr., a native of Sylvester, recently opened his offices at Albany. Practice limited to pediatrics. He graduated at Tulane University of Louisiana School of Medicine, New Orleans, in 1941, and interned at Charity Hospital, New Orleans. He served four years in the U. S. Army with the Eightieth Air Force, including 30 months in the European theater of war.

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The Southern Tuberculosis Conference will be held at the DeSoto Hotel, Savannah, September 30-October 2. An interesting and helpful program has been planned, with many outstanding speakers. Georgia physicians participating on the program will be Dr. Clair A. Henderson, Savannah, commissioner of health, Savannah-Chatham County; Dr. H. C. Schenck, Atltnata, director, division of TB control, Georgia Department of Public Health; Dr. C. C. Aven, Atlanta, 2nd vice-president, Georgia Tuberculosis Association; Dr. Rufus Payne, Rome, superintendent, Battey State Hospital; Dr. Osler A. Abbott, Atlanta, Emory University Hospital; Dr. Robert C. Major, Augusta, professor of thoracic surgery, University of Georgia School of Medicine, and other outstanding physicians of the Southern states.

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The University of Georgia School of Medicine, Augusta, has created a new faculty position, that of a medical artist. Jack Wilson, formerly of Tampa, has been selected for the post, according to Dr. G. Lombard Kelly, dean of the medical school. Mr. Wilson assumed his duties August 1. His work is to illustrate medical papers for members of the faculty and staff. The medical artist is a pupil of Max Broedel, who was medical artist at Johns Hopkins University School of Medicine, Baltimore.

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The Tenth District Medical Society met at Union Point August 12. Dr. Harry L. Cheves, Union Point, was host and supervised the barbecue. Program: "Chest Conditions Amenable to Vascular Surgery", Dr. Robert Major, Augusta. Dr. Peter Wright, Augusta, discussed "The Work of the Fracture Committee of the American College of Surgeons". At the business session it was decided to hold the February 1949 meeting in Augusta, and the August 1949 meeting in Monroe. Officers elected are: Dr. Philip R. Stewart, Monroe, president; Dr. Thomas W. Goodwin, Augusta, vice-president, and Dr. M. C. Adair, Washington, secretary-treasurer.

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The Upson County Medical Society held its regular monthly meeting at Hotel Upson, Thomaston, August 3. Twelve members and five visitors were present. The visitors included Mrs. B. C. Adams, Dr. Enoch Callaway, LaGrange; Dr. M. M. Head, Dr. D. L. Head, Sr., both of Zebulon, and Mr. Callahan, representative of Winthrop-Stearns, Inc. Mr. Callahan showed a colored film entitled "Regional Anesthesia". Dr. R. E. Dallas, president, welcomed Dr. H. D. Tyler as a new member. Dr. Tyler recently opened his office in Thomaston for the practice of internal medicine. Dr. J. M. Kellum, program chairman, introduced Dr. Enoch Callaway, LaGrange, president-elect of the Medical Association of Georgia, as guest speaker. Dr. Callaway spoke informally on "Cancer Control", discussing various types of cancer as requested by those present. Dr. Ivylyn Girardeau, secretary-treasurer.

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Dr. R. A. Vonderlehr, Atlanta, medical director in charge of the Communicable Disease Center, U. S. Public Health Service, recently welcomed to Atlanta Dr. Leonard Scheele of Washington, D. C., surgeon general of the U. S. Public Health Service, to study plans drawn up for a laboratory building for the Communicable Disease Center and to accept from Emory University 15 acres adjoining the Druid Hills campus. On this ground will be built the laboratory to house the Communicable Disease Center. In simple ceremonies at Emory, Charles Howard Candler, chairman of Emory's board of trustees, and President Goodrich C. White, made the presentation. In accepting, Dr. Scheele said in part: "We of the Public Health Service look forward with enthusiasm and confidence to a long and productive partnership with your great university." Presently housed in 32 buildings in Atlanta, Montgomery and Savannah, the Communicable Disease Center will be consolidated in the Emory building. It will be 10½ stories high with 238,000 square feet of floor space, plus a separate six floor laboratory building for infectious diseases. The new headquarters, which may not be built for several years, will cost "upwards of $5,000,000," Dr. Scheele said. Construction of the project hails Atlanta as a great medical center, the surgeon general said. He praised Emory as "one of our leading medical schools, doing an excellent job." As director of the National Cancer Institute, Dr. Scheele worked closely with Emory's Winship Clinic. He pointed out that a graduate of Emory University School of Medicine, Dr. John R. Heller, succeeded him as director of the National Cancer Institute when he moved up to head the entire public health service.

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The Ware County Medical Society held its meeting at the Woman's Club on Plant Avenue, Waycross, August 5. Drs. J. R. Bussell and J. R. Penland were hosts to the members of the society. Dr. L. W. Pierce, secretary-treasurer.

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Dr. Steve Worthy, Carrollton physician, who left several months ago for further studies at the Boston Lying-In Hospital, recently completed his work there and has begun work in the Massachusetts General Hospital, Boston, of which he has been appointed clinical assistant in surgery in the department of gynecology. Dr. Worthy will return to Carrollton the latter part of this year.

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Dr. William A Hopkins, Atlanta, announces his association with Dr. Osler A. Abbott, Emory University Hospital, Atlanta. Practice limited to thoracic surgery. Dr. Hopkins graduated from Emory University School of Medicine, Atlanta, in 1941, and spent three years at Grady Memorial Hospital, Atlanta. He served two years in the U. S. Navy Medical Corps and part of that time was spent in the Pacific area during World War II. Since his discharge from the Navy, Dr. Hopkins has received two years' training in thoracic surgery at Emory University Hospital, Atlanta, and Lawson VA Hospital, Chamblee.

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Georgia physicians registered at the Ninety-Seventh Annual session of the American Medical Association held in Chicago, June 22-25: John L. Barner, Athens; Lee N. Foster, Chamblee; David F. James, Atlanta; Marcus Mashburn, Cumming; James E. Paullin, Atlanta; David S. Putte, Atlanta; Virgil P. Sydenstricker, Augusta; Hyman S. Abrams, Atlanta; Samuel A. Anderson, Milledgeville; Walter M. Bartlett, Atlanta; Robert L. Bennett, Warm Springs; Allen H. Bunce, Atlanta; John F. Busey, Atlanta; F. W. Cooper, Jr., Atlanta; Robt. B. Crichton, Milledgeville; A. N. Dykes, Columbus; I. Elizabeth Fletcher, Statesboro; Leon J. Goodman, Macon; Howard Hailey, Atlanta; L. Harvey Hamff, Atlanta; Edward S. Miller, Atlanta; Benjamin H. Minchew, Waycross; Charles H. Mitchell, Augusta; Thos. L. Ross, Jr., Macon; W. B. Schaefer, Toccoa; Edgar D. Shanks, Atlanta; C. K. Sharp, Arlington; Eustace A. Allen, Atlanta; C. Raymond Arp, Atlanta; Sam C. Atkinson, Woodbine; Paul W. Auston, West Point; F. S. Belcher, Monticello; Edgar Boling, Atlanta; Robert L. Brown, Emory University; R. T. Camp, Fairburn; H. J. Copeland, Griffin; Hugh B. Carson, Warrenton; Emory F. Chaffin, Toccoa; Amey Chappell, Atlanta; Joseph S. Cruise, Atlanta; Arthur William DeLoach, Waycross; W. B. DuVall, Atlanta; D. C. Elkin, Atlanta; William Meade Feild, Albany;

Richard E. Felder, LaGrange; Major F. Fowler, Atlanta; Ivylyn L. Girardeau, Thomaston; Benjamin Goldman, Hazelhurst; Robert B. Greenblatt, Augusta; Harvey E. Griggs, Conyers; Harry T. Harper, Augusta; O. F. Keen, Macon; Raymond E. Lasser, Athens; Walter E. Lee, Jr., Waycross; Harold B. Levin, Atlanta; Harold P. McDonald, Atlanta; Max Michael, Jr., Chamblee; N. J. Newsom, Sandersville; A. M. Phillips, Macon; Hayward S. Phillips, Atlanta; Vernon E. Powell, Atlanta; Marion C. Pruitt, Atlanta; Joseph L. Rankin, Atlanta; Ruben M. Reifler, Macon; John H. Rogers, Atlanta; William A. Smith, Atlanta; Raymond A. Vonderlehr, Atlanta; W. P. Sloan, Jr., Atlanta; John E. Walker, Columbus; T. J. Busey, Fayetteville; Hal M. Davison, Atlanta; Wm. L. Dobes, Atlanta; J. K. Fancher, Atlanta; C. F. Holton, Savannah; Joseph Hiram Kite, Atlanta; Joseph C. Massee, Atlanta; Jack C. Norris, Atlanta; John Robert Rinker, Augusta; Wilford A. Risteen, Augusta; M. Hines Roberts, Atlanta; Fred F. Rudder, Atlanta; Peter B. Wright, Augusta; Everett L. Bishop, Atlanta; Roy L. Denney, Carrollton; Murdock Equen, Atlanta; Wm. H. Good, Jr., Toccoa; E. K. Munn, Columbus; Vladimir Podryski, Augusta; Louis Odessky, Augusta; Samuel J. Sinkoe, Atlanta; John S. Stewart, Decatur; Geo. W. Yavorsky, Belle Plaine, and R. F. Reider, Atlanta.

## COMMUNICATION

Dr. Edgar D. Shanks,
478 Peachtree Street,
Atlanta 3, Georgia
Dear Dr. Shanks:

The Veterans Hospitals in the five southeastern states are extremely short of physicians. It is thought that you might be willing to publish, in your section on Government Services, a brief news notice covering this subject. We believe doctors generally will be interested in the present inadequacies in medical staff existing in our hospitals. At the same time we feel that many physicians are not fully cognizant of the opportunities available for further training in the specialties of medicine and surgery.

We would deeply appreciate it if you would consider the publication of the notice attached herewith in part or in full. The Veterans Administration is not authorized to advertise for physicians, but we feel that the medical profession would be sufficiently interested in this notice to warrant your consideration.

Thank you in advance for your kindness and for any help you may be able to give us in this regard.

Yours very truly,
WALTER M. BARTLETT, M.D.
Chief, General Medical Division
Veterans Administration.

## OBITUARY

*Dr. James Samuel Alsobrook*, aged 77, retired North Georgia physician, former mayor and postmaster of Rossville, died at his home, 319 Chickamauga Avenue, Rossville, August 4, 1948. Dr. Alsobrook was born at Rock Springs, the son of T. J. Alsobrook and Addie Seigler Alsobrook. He graduated from the Atlanta College of Physicians and Surgeons, Atlanta, in 1899. For ten years he practiced medicine in Woodstation and in 1910 moved to Rossville to continue his practice. He was an honorary member of the Walker-Catoosa-Dade Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. He was also a member of the McFarland Memorial Methodist Church, the Masonic Order and the Shrine. He served as president of the Seventh District Medical Society at one time. Dr. Alsobrook is survived by a daughter, Miss Doris Alsobrook; two sons, Dr. Thomas W. Alsobrook and J. Sam Alsobrook; one granddaughter, Lynn Alsobrook, all of Rossville; two sisters, Mrs. Maud Bird, Rock Springs, and Mrs. Ettie Mayfield, Holland, Texas, and two brothers, W. T. Alsobrook, Chattanooga, and Dr. D. C. Alsobrook, Edwards, Miss. Funeral services were held at the McFarland Memorial Methodist Church, with the Rev. H. D. Hart and the Rev. John L. Chaney officiating. Burial was in Forest Hills Cemetery, Rossville.

* * *

*Dr. Franklin Joseph Amis*, aged 60, Hogansville physician, died at his home June 27, 1948. Dr. Amis was a native of Welcome, the son of the late Rev. and Mrs. Frank J. Amis. He graduated from the University of Georgia School of Medicine, Augusta, in 1918. He served in the U. S. Navy Medical Corps during World War I, was a major in the Georgia State Guard, and for the past twenty years or more had been a resident of Hogansville, where he was a practicing physician. He was a member of the Troup County Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He was a Mason, a charter member of the Hogansville Kiwanis Club, a deacon in the First Baptist Church, and district medical examiner for the Boy Scouts of America. He was past commander of the 4th district American Legion, past commander of the Hogansville Legion Post 152, and a director of the City-County Hospital, LaGrange. He is survived by one brother, T. B. Amis, Newberry, S. C.; two sisters, Mrs. L. S. Potts, and Mrs. D. L. Stovall, both of Atlanta. Funeral services were held at the First Baptist Church, Hogansville. Burial was in Oak Hill Cemetery, Newnan.

* * *

*Dr. Robert E. Bowman*, aged 66, Bronwood physician, died at the home of his brother in Dawson following a heart attack June 14, 1948. Dr. Bowman was born in Webster County, Georgia, son of the late Robert Z. Bowman and Ella V. Bowman. He graduated from the Atlanta College of Physicians and Surgeons, Atlanta, in 1904, and began the practice of medicine in Bronwood. In 1915 he married Miss Lucy Stroud of Barnesville, who died in 1946. A veteran of World War I, Dr. Bowman served as a first lieutenant in the Medical Corps and served a year in France. He was a Mason, and former mayor and member of the school board of Bronwood. He was serving as city clerk and councilman at the time of his death. Surviving are a daughter, Mrs. Joe D. Proctor, Woodbine; two sons, David S. Bowman, Albany, and Robert E. Bowman, Jr., Penns Grove, N. J.; a sister, Mrs. S. W. Kennedy, Bronwood, and a brother, Dr. S. D. Bowman, Dawson. Funeral services were held at the First Methodist Church, Bronwood, with the pastor, the Rev. R. E. Llorens officiating, assisted by the Rev. C. D. Herrington, Blackshear, his former pastor. Burial was in Bronwood Cemetery, Bronwood.

* * *

*Dr. William R. Camp*, aged 80, practicing physician since 1890, died at his home in Fairburn August 25, 1948. Dr. Camp was born in old Campbell County, four miles west of Fairburn. He graduated from the Atlanta Medical College, now Emory University School of Medicine, Atlanta, in 1890, and had practiced medicine in Fayette, Campbell and Fulton counties for more than 40 years. He was an honorary member of the Fulton County Medical Society, the Medical Association of Georgia and a fellow of the American Medical Association. He was the father of the late Lawrence S. Camp, who was a United States District Attorney for many years. Dr. Camp was a former mayor of Fairburn, and was on the City Council for many years. He was a member of the Fairburn Baptist Church. Surviving are two daughters, Mrs. Lester Dickson, Fayetteville, and Mrs. H. A. Hodges, Fairburn, two sisters, four brothers, and several grandchildren. Funeral services were held at the Fairburn Baptist Church, and burial was in Fairburn Cemetery, Fairburn.

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*Dr. Linton Cobb McAfee*, aged 67, well known retired Macon physician, died in a Macon hospital August 8, 1948. Dr. McAfee, a native of Culloden, had made his home in Macon since he was 11 years of age, and was a member of the Tattnall Square Bapitst

Church. He graduated from the University of Georgia School of Medicine, Augusta, in 1914, and was a captain in World War I. He was an honorary member of the Bibb County Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. Surviving are one sister, Mrs. Annie McAfee Oliphant, Macon; nephews, Dr. John C. McAfee and Edwin Dargan McAfee, both of Macon, and several cousins. Funeral services were held at Memorial Chapel, with Dr. J. E. Sammons officiating.

* * *

*Dr. Wilmarth Young Seymour*, aged 69, retired Augusta physician, died in an Augusta hospital August 12, 1948. Dr. Seymour was a native of Barrington, R. I., and graduated from the Yale University School of Medicine, New Haven, in 1913. He was with the Massachusetts State Service at Bridgewater for 12 years before entering the Veterans Administration in Augusta. He was a member of the Massachusetts Psychiatric societies, a captain in World War I, a member of the George Washington Lodge of Masons, Warren, R. I., a member of the Elizabeth Chapter, Eastern Star, and an honorary member of Sibley Union, W.C.T.U., both of Augusta. He retired as a physician after 44 years of service, and was a member of the medical staff of Lenwood Hospital, Augusta, for many years. He was a member of the First Baptist Church, Augusta. Survivors are his wife, Mrs. Grace Cole Seymour, and one sister, Mrs. Etta S. Howard, Macon. Funeral services were held at Elliott Sons Chapel, with Dr. A. Warren Huyck officiating. Burial was in Princess Hill Cemetery, Barrington, R. I.

* * *

*Dr. Clarence Walthall Twitty*, aged 69, prominent Newton physician and Baker County leader, died at an Atlanta hospital, July 20, 1948. Dr. Twitty was a native of Monticello, Ark., the son of the late S. G. Twitty and Alice Walthall Twitty. He moved to Baker County at the age of 9. He graduated from the Atlanta School of Medicine, now Emory University School of Medicine, Atlanta, in 1912, and began the practice of medicine in Baker County. He was a member of the Tri-County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. His life had been one of service and friendship to Baker County. He served as county school superintendent for more than 16 years, and was past Worshipful Master of the Milford Masonic Lodge. He was a steward in the Newton Methodist Church. Survivors include his wife, the former Miss Grace Griffin; two sons, Edwin Twitty, Sylvester, and Ralph Twitty, Pompano, Fla., and one brother Richmond Twitty of Arkansas. Funeral services were held in the Milford Methodist Church, with the Rev. N. H. Williams officiating.

## STATISTICIANS FIND RELATIVELY LOW MORTALITY AMONG SPECIALISTS

The mortality rate of physicians who specialize is 30 per cent lower than that of general practitioners, according to a report by Louis I. Dublin, Ph.D., and Mortimer Spiegelman which appears in the August 21 issue of *The Journal of the American Medical Association*.

The two statisticians are from the Metropolitan Life Insurance Company, New York City. Their report is based upon data from the American Medical Directory.

Commenting upon the lower mortality of specialists, they say that the rate "may arise from the self selection of the healthier physicians to continue their studies, from higher income levels, from more favorable conditions of work, and from better opportunities for bettef medical care.

"The rate of mortality from cancer among general surgeons is well below the record for any other specialty and also for nonspecialists. Their advantage in this regard may be a consequence of their training in early recognition of the condition and of their knowledge of the benefit of early treatment.

"On the other hand," they say, "roentgenologists, radiologists, and dermatologists have a high rate of mortality from cancer and leukemia, far above that for non-specialists. This situation among these specialties suggests strongly the effect of their exposure to dangerous radiations."

## CANCER SEMINAR

The Cancer seminar of the Southeastern States will be held on November 8, 9, and 10, 1948, at the Tampa Terrace Hotel, Tampa, Florida. The seminar is under the direction of the Tumor Clinic, Tampa Municipal Hospital, Tampa, Florida, and is sponsored by the American Cancer Society, Florida Division, and the Florida State Board of Health.

The cancer seminar will consist of morning and afternoon sessions, presenting in panel discussion Carcinoma of the Breast, Carcinoma of the Lung, Carcinoma of the Uterus, Carcinoma of the Ovary, Carcinoma of the Stomach, and Lymphoblastoma-Leukemia.

Each symposium will be discussed by a surgeon or internist, a pathologist, and a roentgenologist, who will handle the various phases of diagnosis, pathology, and treatment. At the end of each panel discussion, thirty minutes will be allowed for questions submitted by the audience.

This seminar is conducted for the doctors of the Southeastern States and primarily intended for the benefit of physicians in the general practice of medicine; however, specialists in any field of medicine are urged to attend.

Requests for hotel accommodations should be sent to Mr. A. K. Dickinson, Tampa Chamber of Commerce, Tampa, Florida, stating in your communication that you are attending the cancer seminar.

## PARENTS AND SCHOOLS CAN HELP ADOLESCENTS

Parents can help the adolescent child by preventing family conflicts and schools can meet his emotional and social needs by maintaining "personally meaningful relationships between student and faculty and student and student," points out George J. Mohr, M.D., of Chicago, Ill.

Writing in the August 28 issue of *The Journal of the American Medical Association*, Dr. Mohr emphasizes the difficulty of making the adjustment of adult life.

"Physical growth and development, shift and change in endocrine balance, and accompanying change in social and educational relationships conspire to impose a difficult task of adjustment on the adolescent," he says.

Parents often remain too mistrustful about letting their adolescent children assume responsibility and direction of their own affairs, according to Dr. Mohr. Although children of this age need and readily accept considerable guidance, it must be offered in a manner that recognizes their need to exert their rights, he explains.

Conflict with parents may further unhealthy trends in character development; a sullen withdrawal, with exaggeration of resentful attitudes toward parents and other adults, uncertainty and mistrust as to the child's own capability, and the conviction that he is always at a disadvantage tend to become established, Dr. Mohr says.

Or a family conflict may cause a child who has always been happy and well-adjusted in school to fail in his school work and to have increasing difficulty with the teachers, he comments.

"Often the break between high school and college is the time at which anxiety reactions are encountered.

Whatever his special interests and capacities may be, the student may be devoting so much energy to his problems of inner adjustment as to make him relatively ineffective in any field of academic interest.

"So often the failure is appreciated only if the student actually fails to make good in his school subjects. Failures in the fields of emotional and social orientation are frequently overlooked and more often not understood. They become apparent when the student later runs into actual difficulties in adapting to vocation—to marriage and parenthood."

Explaining the problems of the adolescent who neglects school work for athletics and of the student who becomes a "grind," Dr. Mohr says that adolescents are highly competitive. As a result, they feel that illness or physical disability of any sort is a tremendous threat to prestige. Faced with the threat of physical handicap, an adolescent may deny its existence and refuse to cooperate in treatment, at the same time neglecting his school work for calisthenics and other exercise to develop himself physically. Or he may stake everything on intellectual achievement and isolate himself as a "grind."

"While the emphasis on intellectual achievement may be desirable," Dr. Mohr comments, "the concomitant self depreciation on the physical side tends to maintain an underlying state of anxiety and mistrust that interferes with normal adjustment in social and personal relationships."

The fat boy or girl or the undernourished adolescent who refuses to eat may be struggling with emotional problems and adjustments to adult social life which are beyond his ability to meet, Dr. Mohr indicates.

## HEALTHGRAMS

Mass radiography of all institutions for the mentally ill should be repeated every two years. It is noteworthy that reinvestigation has been productive of a significant number of cases who were negative on previous examinations. A. H. Russakoff, M.D., Am. Rev. Tuberc., Jan., 1947.

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It has been the experience in practically all institutions for the mentally ill in this country, where mass radiography has been carried out, that these hospitals are virtually repositories of tuberculosis. A. H. Russakoff, M.D., Am. Rev. Tuberc., Jan., 1947.

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Streptomycin should never be used as a substitute for proved methods of treating tuberculosis, but only as an ancillary agent and in conjunction with other basic therapeutic procedures. H. McLeod Riggins, M.D., North Carolina M. J., Nov., 1947.

* * *

All patients suffering from poorly controlled diabetes, due either to social circumstances or to therapeutic difficulties, should be submitted to radiological examination of the chest every six months, and all other diabetic patients at yearly intervals. W. R. Gauld, M.D. and A. Lyall, M.D., Brit. M. J., May 17, 1947.

* * *

Successful rehabilitation requires a comprehensive and effective sanatorium program and close cooperation between the sanatorium and the community. All of the community services must be integrated to serve the patient and family during all the phases of treatment, from the time of diagnosis until the individual is fully adjusted. Under these conditions patients will accept sanatorium care, remain till their tuberculosis is arrested and follow through with necessary rehabilitation plans. I. D. Bobrowitz, M.D., Am. Rev. Tuberc., Jan., 1947.

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Medical services are not commodities that can be bought in standardized packages wherever and whenever one has the money to pay for them. Medicine in the Changing Order, Rep. New York Academy Med. Comm., The Commonwealth Fund, 1947.

## VETERANS' NEWS

Disabled veterans may continue their training under the Vocational Rehabilitation Act (Public Law 16) after Veterans Administration suspends their disability compensation for failure to report for a physical re-examination.

However, during the suspension period, they will forfeit the special subsistence and dependency allowances provided for disabled trainees.

During that period, they will receive only the subsistence allowances payable to non-disabled veterans training under the GI Bill.

VA's ruling, announced recently, is based on refusal of a Public Law 16 trainee to report for a physical re-examination VA ordered for disability rating purposes.

The decision held that the veteran's refusal to submit to re-examination does not remove his eligibility to complete his training.

Regardless of the findings of the re-examination, the veteran would be entitled to complete his rehabilitation since he originally established the need for such training, VA explained.

The additional subsistence and dependency allowances provided for Public Law 16 trainees are based on the percentage of disability suffered by the individual veteran.

By his refusal to report for re-examination, the veteran makes it impossible for VA to determine his continuing eligibility for these additional benefits.

As a result, VA must suspend the additional allowances as well as the disability compensation until the veteran submits to the examination and re-establishes his right to the benefits.

## NEW BOOKS

MEDICAL WRITING—THE TECHNIC AND THE ART, by Morris Fishbein, M.D., Editor, *The Journal of the American Medical Association*, Chicago. Second edition, 292 pages, 6x9 inches, illustrated.

This book represents the gradual evolution of theory and practice associated with the conduct of the editorial department of the American Medical Association for 35 years. This Second Edition has been revised and rewritten until it contains 80 pages more than its predecessor. A new chapter on "Indexing" has been included. Such old chapter as "Proofreading" and "Preparation of the Manuscript" have been completely rewritten with the inclusion of numerous illustrations. In the back of the book are located the abbreviations of names of all medical periodicals published in the world. They are of immense aid when writing a bibliography. Dr. Fishbein and his associates have certainly done a most thorough job in preparing this extremely useful book. They are to be congratulated. The book may be obtained through The Blakiston Company, publishers, Philadelphia and Toronto, 1948. Price $4.00.

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SEXUAL BEHAVIOR IN THE HUMAN MALE, by Alfred C. Kinsey, Professor of Zoology, Indiana University, and others. 804 pages, 6x9 inches, with 173 charts and 159 tables.

No book since Darwin's ORIGIN OF SPECIES has caused so much commotion among readers as this one. From coast to coast it became a best seller overnight. It is a scientific study based on case histories obtained from thousands of people by Dr. Kinsey and his associates. It took many years to prepare.

Every doctor should read this book so that he can discuss it intelligently with his patients when they seek his advice. There is hardly a page which does not contain material that can be used in every day practice. The numerous tables and charts are of great value when trying to decide whether or not the behavior of an individual man falls within the range of normal. In cases of psychosexual maladjustment the book is unsurpassed for its usefulness. W. B. Saunders Company, Philadelphia and London, 1948. Price $6.50.

SUCCESSFUL MARRIAGE, edited by Morris Fishbein, M.D. and Ernest W. Burgess, Ph.D. An easily readable, thoroughly modern and authoritative discussion of all aspects of successful married life. Thousands of questions, from the beginnings of sexual attraction to the final rearing of a family, are answered on the basis of long counseling experience by outstanding doctors and advisers on marital relations.

The thirty-eight authors of SUCCESSFUL MARRIAGE constitute the most distinguished panel of specialists ever to do a book on the subject. Each has written with frankness and detail about one phase of marital relations, and all of the material has been integrated by Dr. Fishbein and Dr. Burgess for uniformity and readability.

The book has been widely acclaimed by social and religious leaders throughout the nation. It is a book which the doctor may well recommend to his patients, especially prospective brides and bridegrooms. Doubleday & Company, New York, 1948. Price $6.00.

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CORRELATIVE NEUROANATOMY—4th Edition. A comprehensive manual for the student in gross anatomy, neuroanatomy, neurodiagnosis and neurology which correlates the anatomical and physiological background with the clinical findings of neurological disorders. Included are numerous diagrams which clearly show the distribution and functional components of the cranial, spinal and autonomic nerves, and the essentials of brain and spinal cord localization.

The first part deals with the peripheral nerves, and each major nerve is well illustrated and systematically described. The autonomics are concisely discussed including the physiology and pharmacology of the system.

The second section is on neurodiagnosis and includes a discussion of the anatomy, physiology and localization in the brain and spinal cord. The subjects of motion, sensation, reflexes, trophic changes, electrical examination, intracranial pneumography and examination of the cerebrospinal fluid are thoroughly outlined. A discussion of electroencephalography with representative electroencephalograms has been added.

The third section of the book deals with diseases and disorders of the central nervous system, and has been completely rewritten and enlarged.

The appendix gives a complete list of neurological signs and syndromes, a brief discussion of muscular dystrophies and atrophies and an outline of the neurological examination. This book may be obtained for $3 from the University Medical Publishers, P. O. Box 761, Palo Alto, California.

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**WANTED—Private hospital, 130-bed capacity, wishes to employ full time assistant physician; no surgical work. Salary with home or complete maintenance subject to negotiations according to experience of applicant. Interesting and congenial working conditions. Application received in care of this *Journal*.**

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**WANTED assistant physician, County Tuberculosis Sanatorium in New England. Training in tuberculosis desirable but not essential. Annual salary $3,060, plus maintenance of self and wife, if married. Grade A American Medical School graduate. Send snapshot and full particulars of qualification. Write J.M.A.G., 478 Peachtree St., N. E., Atlanta, Ga.**





*at*
*Miami, Florida*

AN INSPIRING MEDICAL MEETING—the Annual Meeting of the Southern Medical Association in Miami, Florida, October 25-28. In the general clinical sessions by Miami physicians and surgeons, the twenty-one sections and the scientific and technical exhibits, every phase of medicine and surgery will be covered—**the last word in modern, practical, scientific medicine and surgery.** Addresses and papers by distinguished clinicians not only from the South, but from many parts of the United States.

**REGARDLESS of what any physician may be interested in, regardless of how general or how limited his interest, there will be at Miami a scientific program and recreational facilities to challenge his every interest and make it worth-while for him to attend.**

ALL MEMBERS of state and county medical societies in the South are cordially invited to attend. And all members of state and county medical societies in the South should be and can be members of the Southern Medical Association. The annual dues of $5.00 include the Southern Medical Journal, a journal valuable to physicians of the South, one that each should have on his reading table.

SOUTHERN MEDICAL ASSOCIATION
Empire Building
BIRMINGHAM 3, ALABAMA

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# SOME OF GEORGIA'S MEDICAL PROBLEMS

EDGAR H. GREENE, M.D.
*Atlanta*

Your invitation to address the Georgia Public Health Association is sincerely appreciated.

Recently, at health meetings and medical conferences, speakers have been verbose in enumerating the problems of health and the methods of solution of these problems. It is not my intention to dwell upon the cause of these health conditions but to point out what I consider some of the salient problems. We do not want to adopt the tactics of the floogie bird, who flies backward, reviewing what has already taken place, but we want rather to use the care exercised by a skilled motorist in steering a safe course ahead, while at the same time keeping a watchful eye on the rear-view mirror of the past.

In the span of my own life-time, medicine has made rapid strides. Since the turn of the century major epidemics have been conquered. I well remember how very few Georgia families went through a summer without one or more members suffering from typhoid fever, with its fearful mortality. Malaria was prevalent and diphtheria was looked upon as almost certain death. We were just learning of the Pasteur treatment, and smallpox was not unusual in the cities of Georgia. Venereal diseases were rampant through all sections, even though no newspaper dared mention one by name.

Since that not so distant date, think of our accomplishments in the marked reduction of typhoid fever, malaria, smallpox, diphtheria, and typhus fever. Many of these scourges have been almost entirely eradicated. Venereal diseases have been unmasked and practically every intelligent adolescent knows something of the havoc wrought upon our civilization by these blackguards.

Through education we attain great achievements, so let us give thanks to the ministers and school teachers for their careful and thoughtful approach in bringing the problems of hygiene and sanitation to the attention of their students. As a result of this pioneer work, some of Georgia's secondary schools are giving courses in social and mental hygiene. More teachers, properly instructed, are needed to improve and expand this program.

No state can progress without a good health program. To achieve this objective the cooperation of the medical, dental, nursing, engineering, teaching, and allied professions, with the aid of the press and radio, is necessary.

In 1912, when Mr. Robert F. Maddox, of Atlanta, became a member of the Georgia Board of Health, the annual budget was about $36,000, while during the year 1947 over $7,500,000 were spent for a better health program in Georgia. Largely because of the interest and untiring efforts of the former director of the State Health Department, Dr. T. F. Abercrombie, and Mr. Maddox, aided and encouraged by the Medi-

Address before the meeting of the Georgia Public Health Association, Savannah, May 10, 1948.

cal Association of Georgia, great advances in health have been made in our State. I believe that this fine work will be continued in a most satisfactory and progressive manner by our new director, Dr. Thomas F. Sellers.

If we expect our farmers to enjoy a full life and supply the great metropolitan markets with foodstuffs and other products; if we expect industry to develop in Georgia, we must continue to improve the health of the community so that Georgians and prospective residents of Georgia will find our State the very best section in which to live.

What are some of Georgia's medical problems today? In order to interpret more clearly these problems, let's look first into the national situation.

"There are 150,000 practicing physicians, including the teeming specialists, in the United States. There is one general physician for each 1500 inhabitants. The need is one physician for each 1,000 inhabitants. In 500 counties of the nation there is only one general physician for each 3,000 inhabitants, while in 81 counties there are none at all." (Walter Locke—in *The Atlanta Journal*, February 16, 1948). Thus we see the problem of improper distribution of physicians in some rural areas.

To give our mental cases in the United States reasonable care, the number of psychiatrists—4241—should be more than trebled. Here we see the need for more trained physicians in this field.

The Veterans Administration wants 35 per cent of the medical graduates for the next five years. The Public Health Service requires a large number of young doctors each year, and if we develop a peace-time army of one million men, about 6,000 physicians will be required for that service alone.

The United States Public Health Service recently forecast a shortage of 30,000 to 50,000 physicians by 1960. (With 77 class A medical schools graduating about 6,000 a year and the heavy loss the profession sustains during the same period by infirmity, retirement, or death, it would seem that the forecast is not unreasonable). This poses the question: Are sufficient physicians being graduated each year? An even greater shortage exists in the nursing profession, but I will return to that phase of the subject later.

"In the United States are 6511 hospitals with beds for 1,738,944 patients. There are 7,000,000 people sick today. Only one in four could find room in the hospital. In 41 per cent of the counties with 15,000,000 people there is no standard general hospital. Health needs more hospitals. In *one* year sickness costs us about $15,000,000,000, which is about two billion dollars less than the Marshall Plan proposes to expend in Europe in *four* years of rehabilitation. The people in this country spent about $7,500,000,000 in 1947 for alcoholic beverages; two and one half billions more than they spent for medicine and medical care. Congress last year voted $29,866,200 for research in the control and cure of the diseases of plants and animals, while in the same year it voted $28,000,000 (almost two million dollars less) for research in the control and cure of the diseases of human beings. At the same time the nation, publicly and privately, was spending $450,000,000 on industrial research—ways to produce other wealth than human health." (Walter Locke, *The Atlanta Journal*—February 16, 1948).

With this information for a background, let's look at the situation in Georgia: 59 Georgia counties have no hospital facilities, public or private. Only three counties have more than 5 hospital beds per 1,000 population. Georgia has only 12 standard public health center buildings and 12 auxiliary units. Sixty-eight counties have no health

facilities whatsoever. There are no public mental health clinics in Georgia. (The United States Public Health Service has set a goal of one mental health clinic for every 100,000 of population). Only 40 counties have public health officers. One hundred nineteen have none. There are 1,984 physicians in private practice in Georgia (1,858 white and 126 Negro). There are 47 doctors engaged in full-time State and local public health work in Georgia (The United States Public Health Service sets one for every 50,000 of population as a minimum). Seventy-four counties have public health nurses; 85 have none. There are about 4,500 registered nurses in Georgia (less than half the number considered minimum by the United States Public Health Service). Fourteen counties have only one doctor per county. Georgia has today half as many doctors per person (one for every 1,514 people); half as many hospital beds per person (only three states had fewer beds per 1,000 population in 1944); and less than half as many nurses per person (one for every 656 people) as the average in our sister states (figures and information on Georgia from Georgia Citizens Council Pamphlet).

The figures just quoted depict the situation both nationally and locally. What are we doing and what can we propose toward the solution of Georgia's problems? The answer, as I see it, lies in the trinity of *Study*, *Conference* and *Performance*.

On October 8, 1947, a Regional Health Conference of eight southeastern states was sponsored by the Medical Association of Georgia in cooperation with the Council on Medical Service of the American Medical Association, and a two-day meeting was held at the Academy of Medicine in Atlanta. Outstanding lay, public health, and medical leaders participated in the conference. The key-note of the meeting was Rural Health Problems. In addition, public health matters, medical facilities, hospital bed shortage, nurse shortage, and problems of education and economics were discussed.

In an effort to develop an over-all coordinated program for better health and adequate medical and nursing care in Georgia as suggested by Dr. Steve Kenyon, then president of the Medical Association of Georgia, a two-day program of study was held at the Academy of Medicine in Atlanta March 19-20, 1948. This meeting apparently was very successful, about 80 persons attending the conference. The problems of physician, nurse, and hospital bed shortage, and the unequal distribution of all three, were discussed, as was the matter of prepayment insurance plans for medical care. Committees were appointed to continue the study and a general meeting is to be called later this year, at which time it is hoped that sufficient information will be ready to make a full report. Any proposed legislation necessary to carry forward the committee findings will be ready, if possible, for consideration by the Georgia General Assembly in January, 1949.

It appears that we have less than 5,000 registered nurses in Georgia. This is about half the minimum requirement for normal peace-time conditions. Both Virginia and North Carolina have enacted laws which permit the licensing of practical nurses after one year of special training. Reports from both of these states indicate that the nursing care of the sick in those states is no longer a source of worry, and conversations and correspondence with Dr. W. M. Coppridge, author of "The North Carolina Good Health Program", Mr. Sample Corbus, superintendent of the Watts Hospital, Durham, North Carolina, and Dr. W. T. Sanger, president of the Medical College of Virginia, are very reassuring that any state that adopts similar legislation will be gratified

with the subsequent benefits. I sincerely urge your cooperation to the end that similar laws will be enacted in Georgia. Such legislation will assure proper staffing of the small hospitals and will insure greatly needed nursing care for the sick and infirm in our State.

Present medical care in the United States compares favorably with that which existed in other leading nations prior to World War II, and in most instances surpasses it. But there is room for improvement. Provision should be made to render medical care to individuals and families in all localities of our State not possessed of the resources to enable them to pay for adequate medical attention. A committee from the Medical Association of Georgia is now working on a voluntary prepayment medical care plan and it expects to have definite plans ready for action before the next meeting of the State Legislature.

The proper operation of a hospital and clinic building program, under the plan permitted by the Hill-Burton Federal law, will be of great help to the various sections of the State. The building and equipping of good hospitals will induce young doctors to locate near them. Improved means of transportation will make these hospitals accessible to those who live in the most remote areas.

I could relate here something of the excellent work being done by the Cancer Commission of the Medical Association of Georgia; the Crippled Children's Program; the fine accomplishments of the Division of Vocational Rehabilitation; the constant war on tuberculosis, infantile paralysis, and many others, but it is well known to you. The splendid program of Health Education being carried out all over the State by the Woman's Auxiliary to the Medical Association of Georgia is something of which I am particularly proud. The aforementioned, and other organizations, especially the Parent-Teachers Association, should reap a reward of deep satisfaction from their untiring efforts.

At the meeting of the Medical Association of Georgia this year a Committee on Neuropsychiatry was authorized. One of the functions of this committee will be to go into the matter of better care for our mentally ill. It is quite likely that something will be developed that will result in better treatment and care of these patients, and probably one of the first things asked for will be the placing of people in this category under good medical supervision, instead of in the care of law enforcement officers. This committee might also investigate Georgia's present law providing for the sterilization of criminals and ascertain if it is properly functioning.

On several occasions efforts have been made to enact legislation in Georgia requiring a competent pre-marital physical and serologic examination for both men and women. This legislation is long past due in Georgia.

Georgia has had its health problems in the past, many of which have been overcome. She has her problems today, but none too great to be solved by diligent study, frequent conference, and an aroused public interest in the passage of adequate laws which should open the way to a greater and healthier Georgia.

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HEALTHGRAMS

Much could be learned about the epidemiology of tuberculosis if we could encourage the participation of more general practitioners in field studies throughout the country. The routine use of the tuberculin test on every person who visits the rural doctor's office would uncover a surprising number of hidden and unsuspected cases of tuberculosis. The examination of family contracts and a search for the original spreader leads the family physician away from his relentless daily routine into exciting by-paths of epidemiologic investigations. Through the utilization of modern methods of diagnosis and follow-up the rural physician extends the frontiers of knowledge of this puzzling disease. Herman E. Hilleboe, M.D., Journal-Lancet, June, 1947.

* * *

Although a mere two per cent of the nation's doctors are qualified psychiatrists, 60 per cent of the Veterans Administration medical load consists of patients requiring psychiatric care.

# STREPTOMYCIN IN THE THERAPY OF GRANULOMA INGUINALE

*Report of 100 Cases*

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Robert B. Dienst, Ph.D.
*Augusta*

Streptomycin is highly effective in the treatment of granuloma inguinale. This fact has been brought forth in our three previous publications[1,2,3]. The following is a report on its extended use and follow-up studies in 100 consecutive cases treated at the University of Georgia School of Medicine during the past one and one half years.

The patients selected for these studies were all laboratory proven cases of granuloma inguinale of two weeks to 20 years duration. They all belonged to the colored race. Their age ranged from 18 to 70 years, the majority were between 20 and 40 years of age (average 33 years) (Chart 1). Among them 65 were males and 35 females. Sixty-seven of them (67 per cent) had been treated with some form or forms of antimonial preparations; viz., fuadin, anthiomaline and tartar emetic, varying from a single injection to triweekly or weekly injections on and off for over ten years. Some had been "cured" but recurrences followed; some had shown only slight improvement, and others had not been benefited at all. The remaining 33 cases (33 per cent), however, had not received any specific medication prior to admission.

The lesions occurred on different parts of the body in the following order of frequency: genital, inguinal, perigenital and extragenital areas. The size of lesions varied from one to several hundred square centimeters.

These patients were arbitrarily divided into three groups regardless of their duration of disease and previous medication (Table 1). The first group consisting of 32 patients was treated with a daily dosage of 0.3 to 2.0 grams of streptomycin for six of 62 days, averaging 22 days. The second group consisting of 61 patients formed the bulk of the patients. They were all treated with a uniform dosage schedule of 4 grams per day for five days. The third group with 7 patients who had very extensive lesions was treated with 4 grams per day for six to ten days. In all cases the antibiotic was dissolved in distilled water containing 20 to 30 per cent of a 1 per cent procaine hydrochloride solution and injected intramuscularly in divided doses every four hours.

In the first group in which patients were receiving a daily dose of 2 grams or less, the response was good but rather slow. Donovan bodies often persisted up to ten days and lesions took many weeks to heal. There were two patients who failed to respond to 1 gram per day for 28 days and 2 grams per day for 30 days respectively. These two patients later became streptomycin-resistant. With the 4-gram-per-day dosage schedule, on the other hand, there were no primary failures. Subjective, objective, and microscopic improvements were usually seen as early as 24 hours. The usual feeling of uneasiness and soreness was markedly relieved and a sense of well-being was often experienced; lesions became drier and cleaner and healthy granulation tissue began to appear; smears taken at this time showed some degree of distintegration of Donovan bodies, though their number was not appreciably reduced. After 48 hours symptoms were usually completely alleviated and Donovan bodies showed further

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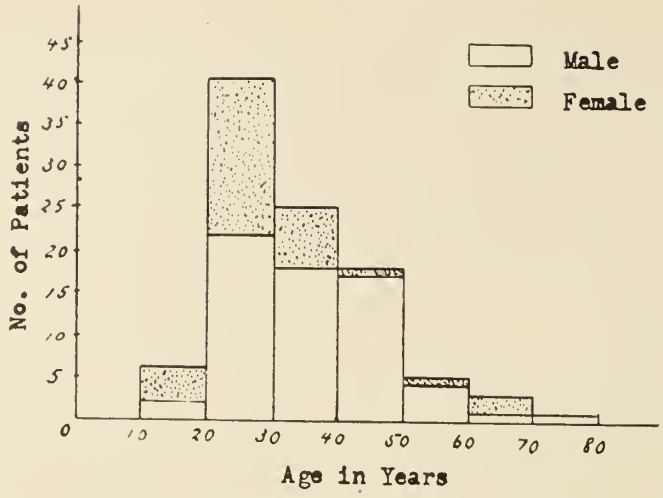



**Chart 1 - Sex Distribution in Age Groups**

TABLE 1

DOSAGE AND RESULTS

| Total Number of Patients Treated | DOSAGE | | | RESULTS | | |
|---|---|---|---|---|---|---|
| | 2 gm. or less/d. IM for av. 22 d. | 4 gm./d. IM for 5 d. | 4 gm./d. IM for 6-10 d. | Successful | Recurrence | Failure |
| 100 (Male: 65 Female: 35) | 32 | | | 24 (75%) | 6 (19%) | 2 (6%) |
| | | 61 | | 57 (95%) | 4 (5%) | 0 (0%) |
| | | | 7 | 7 (100%) | 0 (0%) | 0 (0%) |

disintegration with decrease in number. In favorable cases complete disappearance of Donovan bodies and beginning of epithelialization were observed at the end of third or fourth day and complete healing at the end of fifth or sixth day. However, the majority showed disappearance of Donovan bodies at the end of a 5-day course of streptomycin and complete healing with depigmented cicatrization in one to two weeks. In cases with more extensive lesions, or in those whose lesions were kept moist or in apposition to other surfaces, complete healing was sometimes delayed from two to three months in spite of the fact that Donovan bodies had disappeared within the usual time interval.

During the early part of our studies, mild toxic reactions were seen in five patients. These included pruritus, urticaria, vesicles and burning sensations in the eye and were reported in the January 10, 1947, issue of the *Journal of the American Medical Association*[3]. Since then there were no addi-

TABLE 2

RECURRENCES AND FAILURES

| Number of Patients | Original Dosage | Dosage for Re-Treatment | Results |
|---|---|---|---|
| 12 (Male: 10 Female: 2) | 0.3 gm./d. for 11 days (3.3 gm.) | 4.0 gm./d. for 10 days (40 gm.) | Healed |
| | 0.3 gm./d. for 12 days (3.6 gm.) | 4.0 gm./d. for 7½ days (30 gm.) | Healed |
| | 0.3 gm./d. for 35 days (10.5 gm.) | 4.0 gm./d. for 5 days (20 gm.) | Healed |
| | 4.0 gm./d. for 5 days (20 gm.) | 4.0 gm./d. for 10 days (40 gm.) | Healed |
| | 0.6 gm./d. for 11 days (6.6 gm.) | 4.0 gm./d. for 7½ days (30 gm.) | Healing |
| | 1.0 gm./d. for 13 days (13 gm.) | 4.0 gm./d. for 10 days (40 gm.) | Healing |
| | 4.0 gm./d. for 5 days (20 gm.) | 4.0 gm./d. for 10 days (40 gm.) | Healing |
| | 1.0 gm./d. for 28 days (28 gm.) | 1.5 gm./d. for 41 days (61.5 gm.)<br>4.0 gm./d. for 10 days (40 gm.) | Failed |
| | 2.0 gm./d. for 30 days (60 gm.) | 4.0 gm./d. for 10 days (40 gm.) | Failed |
| | 1.0 gm./d. for 44 days (44 gm.) | To be retreated | |
| | 4.0 gm./d. for 5 days (20 gm.) | To be retreated | |
| | 4.0 gm./d. for 5 days (20 gm.) | Died of recurrence (?) untreated | |

tional cases who developed symptoms of toxicity.

All patients, after dismissal, were asked to return regularly for rechecks at least every two months and in special cases as frequently as every week or two. Up to date 80 per cent of our patients have been followed in this manner from two to 18 months, over one third of them having been followed for more than one year. During this period there were 6 recurrences in the first group, 4 recurrences in the second group and no recurrences in the third group (Table 1).

Seven of the recurrences have been retreated with the 4-gram-per-day schedule for five to ten days with normal healing in each case. Two patients have not been retreated. One patient, who failed to return, died several months later with what may be accepted as a recurrence. His relatives said that he was "eaten away with sores all over his front and back" (Table 2).

### *Conclusions*

From the above studies of 100 cases, it is evident that streptomycin so far constitutes the best treatment for granuloma inguinale. It is effective even in small dosage, though recurrences are more frequent and there is danger of creating streptomycin resistance, as in two of our cases. According to our experience, the optimal daily dosage probably is 4 grams in divided doses. For average cases of granuloma inguinale a 5-day course is generally sufficient to effect a cure. But in cases with very extensive lesions or in whom clinical and microscopic responses are not so prompt, a 10-day course is probably to be preferred.

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## HEALTHGRAMS

Persistent pulmonary infiltrations are associated with histoplasmin sensitivity much more frequently than with tuberculin sensitivity among Kansas City school children. Michael L. Furcolow, M.D., Herbert L. Mantz, M.D., and Ira Lewis. Pub. Health Rep., Dec. 5, 1947.

* * *

To advocate the indiscriminate use of streptomycin, especially in moderately advanced or advanced cases of pulmonary tuberculosis, not only is premature but also carries with it certain dangers and drawbacks. Among the principal dangers in the use of this drug is its toxicity, which may seriously affect hearing, sight and kidney function and cause skin eruptions. At present, it can only be said that we have seen little in the treatment of well established pulmonary tuberculosis by streptomycin that gives cause for any great optimism regarding its curative value. Comm. on Tuberc., N. H. Med. Soc., New England J. Med., Oct. 23, 1947.

# STREPTOMYCIN AND TUBERCULOSIS

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It is not the intention or purpose of this discussion to repeat the well known data concerning the discovery, and experimental use of streptomycin. We shall attempt to deal with the practical application of the drug, its uses, indications, contraindications, dosages and hazards. The observations in this paper are drawn from current literature with applications to its use in private practice.

Streptomycin is indicated in many diseases and disease processes other than tuberculosis, but our discussion will be limited to its use in this disease. Healing in tuberculosis must be accomplished by a slow process of resorption, fibrosis, or calcification. Chemotherapy cannot change this, but must be used primarily for the prevention or extension of the infection while these changes are taking place. Because of these facts, both caution and conservatism must be used in appraising the worth of this drug.

The first requisite for the use of streptomycin is a proven diagnosis of tuberculosis. The most frequent indication noted in literature is in an acute exudative type of lesion. Since streptomycin is only bacteriostatic and not bactericidal, it will in this type of lesion prevent many times caseation, and cavitation, but probably does not produce a complete cure. In other than the white race, especially negroes, the exudative type of disease is rapid in its progress, therefore the use of streptomycin in these individuals with exudative lesions is usually imperative.

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The serious nature of tuberculous meningitis makes it the most urgent indication for the use of streptomycin. Heretofore this complication has never responded to any type of treatment. Even though there may have been an occasional spontaneous recovery, there has been no recognized therapy. Without any attempt to compile statistics, we note that many observers report satisfactory results with as high as 50 per cent of cases still considered recovered, after a year's observation. Such residuals as deafness, loss of reflexes, interference with vision, etc., have been reported in a number of these living patients.

The prognosis has always been poor in laryngeal tuberculosis. In this type of disease, due to the swelling of the glottis, epiglottis, or vocal cords, deglutition and phonation are painful. With the use of streptomycin the swelling rather quickly subsides, resulting within a few days in relief of much of the pain of swallowing or speaking. This not only improves the nutrition of these individuals but markedly adds to their morale, and eliminates the need for habit-forming drugs. If streptomycin had no other use, its value in these cases would justify the expenditure of money and human energy that have been spent in its discovery and development. Since the advent of bronchology, some progress has been made in the treatment of tracheobronchial disease by the direct application of various drugs. Streptomycin is more highly effective at times, but this does not totally replace the former procedures. In some clinics and institutions aerosol administration is still being used, but many workers have discontinued this method.

In the acute hematogenous and lymphogenous types of miliary disease, streptomycin has proven to be of great value. As in some other forms of tuberculosis these

cases are highly fatal, but with the use of this drug the mortality rate has shown a marked decline. Sufficient time has not elapsed since the earliest recoveries were reported to properly evaluate the drug, as these cases ordinarily show a strong tendency to relapse.

In tuberculous empyema the results reported have not been very satisfactory, since this often proves to be a surgical problem. Time forbids our further discussion except to say that general clinical improvement often follows the use of the drug.

The symptoms of genito-urinary tuberculosis are very dramatic in their response to the drug. During its administration the urine shows a high streptomycin concentration, yet recurrences and relapses are frequent. Some observers in this field are using chaulmoogra oil in one cubic centimeter dosage, in conjunction with streptomycin, because of its apparent symbiotic action.

Closure of sinuses which have usually resulted from thoracenteses, nephrectomies, bone necroses, and caseous glands have usually shown very favorable results. Although the patient is most grateful for the closure of these lesions, sufficient time has not elapsed to determine if these results are permanent.

We have under our observation one case of cervical adenitis, proven by biopsy, which has shown rapid clinical and symptomatic improvement. It has been very obvious from the observation of many workers in this field, that glandular tuberculosis yields to streptomycin with excellent response.

Most thoracic surgeons are using streptomycin in an effort to prevent spreads to the contralateral lung, in major surgery, such as thoracoplasties, lobectomies, segmental resections and pneumonectomies. A larger series, with controls, will be necessary to completely evaluate streptomycin in this field.

There is considerable evidence that streptomycin is useful, at least for symptomatic relief, in tuberculosis of the alimentary tract and the peritoneum. The value of the oral route for its use is questionable.

In bone and joint tuberculosis the use of streptomycin is justified, but further study must be made to properly evaluate its use.

In the rarer forms of extrapulmonary tuberculosis, such as pericardial, cutaneous, etc., experience is too limited to warrant definite conclusions. Further observations in these types of cases are being made.

The original regimens include dosages from two to four grams daily, being given in equal amounts every three to four hours. The trend during the past year, however, has been toward a smaller dosage, with the same apparent results, except in the acute miliary and meningeal forms. In our experience clinical response has been as satisfactory from one-half gram as from one gram. The minimal effective dose of streptomycin for the various forms of tuberculosis has not been determined, nor do we know how to vary our dosages to secure the optimum results in each case. The intramuscular route is the one usually used. In tuberculous meningitis the drug is also given intrathecally, at intervals of from one to three days at first, and as the case shows satisfactory improvement the intervals are lengthened to a weekly basis.

The administration of the drug may be intramuscular, intrathecal, intrapleural, intraperitoneal, intravenous, aerosol, topical application and by oral routes. The interval between doses has been lengthened to twelve hours with apparent satisfactory results. The drug may also be given intravenously but this route has no known advantages. The average time of administra-

tion is from three to six months.

Streptomycin is contraindicated at the present time for the treatment of chronic fibroid or fibrocaseous pulmonary tuberculosis, apparently terminal types of destructive pulmonary tuberculosis, or any early case of pulmonary tuberculosis with an otherwise favorable prognosis.

Toxic reactions are an important consideration. Although no deaths have occurred that were attributable to streptomycin, certain reactions and hazards require attention. The most important encountered has been damage to the eighth nerve, with vertigo occurring in all of our small series of cases. It may vary from mild dizziness to an extreme vertigo with incapacity for movement. None of ours proved to be permanent. Younger individuals show greater ability to compensate than do the aged. This complication may argue against the use of streptomycin in minimal pulmonary tuberculosis, or when the hazard of treatment exceeds that of the disease. Any of the following reactions may occur: local irritation at the site of injection, contact dermatitis, various skin reactions, such as pruritus, erythema, etc., renal damage, severe headaches, nausea and vomiting and occasionally fever.

There has been some feeling on the part of most observers and research workers that streptomycin is unsafe for home use. We, however, desire to give evidence that its use in the home may be with a fair degree of safety. The principal disadvantage is the lack of available laboratory facilities and studies. We are confident that the home use of streptomycin has saved the lives of a few of our patients and still others have been made more comfortable, probably eliminating the use of opiates for the control of pain. We have encountered most of the complications but none proved serious or permanent. The reduction by the manufacturers of the amount of impurities in the drug and the use of small dosages have probably been factors in minimizing our complications.

Sufficient laboratory work has been done to prove that after a period of treatment the sputum of most patients contain tubercle bacilli which are resistant to streptomycin. The nature of this phenomenon, how it is acquired, and the frequency of its occurrence has not been determined and further studies must be made. Until these factors have been more adequately ascertained, we feel that streptomycin should be given according to its clinical indications and effects.

Although the drug is not curative in many forms of pulmonary diseases, it has been a factor in the conversion of positive sputum cases to negative ones, thereby decreasing the public health menace for at least a time. In many instances in which the sputum is not converted, the cough, the amount of expectoration, and the number of bacilli are reduced, thereby minimizing the public health hazard.

### *Conclusions*

1. Streptomycin is not a substitute for the tried procedures of treatment.

2. Streptomycin is an important adjunct in the treatment of tuberculosis.

3. Streptomycin presents definite hazards requiring caution in its administration.

4. At least three more years will be required for a complete evaluation of the drug.

5. The dosage and methods of administration are not yet established and uniform.

6. The use of streptomycin is mandatory in meningitis, miliary tuberculosis, ulcerative lesions of the larynx, trachea, bronchi, alimentary and urinary tracts.

7. Streptomycin may be used in the home with safety.

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# TREATMENT OF INFLUENZAL MENINGITIS WITH STREPTOMYCIN AND SULFADIAZINE

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and
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*Macon*

While there are types A, B, C, D, E and F of influenzal bacilli affecting the meninges in young children, the *Bacillus hemophilus* is the outstanding causative agent of this disease.

*Bacteriologic Diagnosis of H. Influenzae*

I. Gram stain of sedimented spinal fluid. The organism is an extremely small pleomorphic gram negative rod. In spinal fluid, it may also be filamentous at times.

II. Culture of the spinal fluid and blood.

a. Growth requirements.

1. X and V factors.

X factor—heat stable factor found in hematin.

V factor—heat labile factor, one of the coenzymes, found in yeasts, staphylococci, etc.

The media which incorporates both factors is fresh chocolate blood agar.

2. Satellite phenomenon. If *H. influenzae* and staphylococci are grown together, then there will be a more luxuriant growth of *H. influenzae* in the area about the staphylococci. This is due to the liberation of the V factor by the staphylococci. This method is used to aid in the presumptive bacteriologic diagnosis of the *H. influenzae* when it is cultured from the spinal fluid.

3. $CO_2$.—The *H. influenzae* grows better in an atmosphere of reduced $O_2$ tension.

III. Serologic identification. a. Smooth and Rough Colonies.

1. Anitgenic structure of the smooth forms. a. Types A-F.—These are the encapsulated forms. In *H. influenzal* meningitis, type B is the predominant pathogen, being the cause of 95 per cent of the meningitis due to this organism. The type specificity is due to a capsular polysaccharide.

b. Specificity is demonstrated by the Quellung reaction, either directly with the spinal fluid or with the cultured organisms. This is performed like a pneumococcal Quellung reaction.

There have been three periods of treatment in the last decade which have proven to be of great advantage in the cure of this once fatal disease. The following agents have been used, either singly or together: For the first period sulfadiazine was used alone with the resultant 30 per cent cure and 70 per cent mortality. Later Alexander's serum was added and a greater number of cures were obtained. Today we have one more important agent added to the last two, and that is streptomycin.

The demonstration of Waksman and others of the marked sensitivity of streptomycin to the type B. *hemophilus influenzae* has led many workers to use this medication in practically all cases of influenzal meningitis.

Before we discuss the use of this drug in the treatment of influenzal meningitis it might be of interest to consider some of the problems in the therapy of these cases.

The disease is usually more common in children below three years of age, and

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naturally the most serious cases are patients below six months of age. The level of the sugar in the spinal fluid is of importance in defining the exact treatment in these cases. The sugar is usually between 0 and 35 to 40 mg., and a sugar below 15 mg. has been considered serious enough to offer a bad prognosis.

*Method of Treatment*

We have used the following method in treating patients regardless of the amount of sulfadiazine they may have received before admission to the hospital. (1) Sulfadiazine is given in the form of 1½ gr. per pound of body weight per day for approximately 17 days. If the patient cannot take this medicine by mouth it is given in the form of sodium sulfadiazine subcutaneously. (2) Streptomycin is given in the dosage of 1 gm. per day regardless of the weight of the patient. This is done primarily to remove as many bacilli as possible from the blood and spinal fluid so that the streptomycin resistant bacteria have no chance to multiply. The streptomycin is dissolved in about 8 cc. of water, and 1 cc. is given every 3 hours, intramuscularly, from 4 to 7 days, according to the seriousness of the illness of the patient. At the same time 30 mg. is given intrathecally for the same number of days. (3) Alexander's rabbit serum has been eliminated in this series of cases except in one case where we knew that the patient was very seriously ill. This patient had a spinal block, the fluid was scarce, very purulent and only 2 cc. could be obtained from the lumbar puncture. A cisternal puncture had to be done. This patient had to be treated with streptomycin, both through the spinal tap and the cistern. We felt that rabbit serum should be added to the treatment due to the seriousness of this case—100 mg. were given intramuscularly, but patient did not survive.

We present now a typical case with physical signs and treatment outlined:

S.G.V., female, 2 years of age. Admitted Nov. 21, 1947. One week before admision to the hospital she had fever and headache. The day before admission she had sore throat, high fever and was irrational. On admission the patient's temperature was 103° F., pulse 124, respiration 44. She was stuporous and very irritable when aroused. There was a positive Brudzinski and the reflexes were hyperactive.

*Toxicity*

There have been seen by different writers the following toxic symptoms:

1. Occasionally convulsive seizures continue when the patient is apparently well, which are due to lesions in the motor area, possibly as a result of interference of the blood supply in that area.
2. Eighth nerve involvement.
3. Marked albuminuria.

These toxic symptoms in our cases were not seen except for mild albuminuria, which may be seen in other febrile conditions.

*Sensitivity*

The sensitivity of *Bacillus hemophilus* to streptomycin should be, if possible, tested on all cases, and if the sensitivity is very low it would be advisable to do the following things: (1) Test the sensitivity of this bacteria to penicillin with the possibility that some organisms may be sensitive to this drug. (2) The addition of 100 cc. of Alexander's serum given in two doses twenty-four hours apart, either intravenously or intramuscularly.

*Discussion*

We have treated a great number of patients with sulfadiazine and streptomycin alone. A detailed description of the treatment of these cases will be found in another publication. Except where spinal block was present and where streptomycin had to be given intrathecally, both by the lumbar route and through the cistern, the patients usually recovered, and patients, no matter how young, will get well without any residual symptoms.

## SPINAL FLUID STUDIES

| Dates | Nov. 21, 1947 | Nov. 22, 1947 | Nov. 23, 1947 | Nov. 24, 1947 | Dec. 2, 1947 |
|---|---|---|---|---|---|
| Relaxation | Fair | Fair | Fair | Fair | Fair |
| Color | Ground glass | Ground glass | Ground glass | Ground glass | Ground glass |
| W.B.C. | 1904 | 5040 | 1385 | 396 | 132 |
| P.M.N. | 86% | 98% | 91% | 52% | 72% |
| Pandy | 2+ | 2+ | 1+ | 1+ | 1+ |
| Total Protein | 167% | 187% | 72% | 70% | |
| Sugar | 23 mg.% | 91 mg.% | 70 mg. % | 57 mg. % | 93 mg. % |
| Chloride | 680 mg.% | | | 730% | |
| Culture | *H. Influenzae* Type B | No growth | No growth | No growth | No growth |
| Remarks | 32 mg. Streptomycin I. T. | 32 mg. Streptomycin I. T. | 32 mg. Streptomycin I. T. | 32 mg. Streptomycin I. T. | 32 mg. Streptomycin I. T. |

We feel that from our studies of this series of cases that excellent results can be obtained by the use of these two drugs, if used cautiously and in larger doses than have been prescribed in the past.

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## DISCUSSION OF PAPERS ON THE USE OF STREPTOMYCIN AND OTHER DRUGS

DR. ALBERT HEYMAN (Atlanta): Dr. Chen and his associates have made a very extensive and thorough investigation of the value of streptomycin in the treatment of granuloma inguinale. I myself have seen only a few cases treated with streptomycin, but I have been impressed with its value and effectiveness. Patients who have failed to respond to antimonial therapy often show rapid improvement following a few days of streptomycin. The discovery of the causative organism of this disease as a gram negative bacillus makes the use of streptomycin a logical procedure.

Granuloma inguinale is often a very serious disease. There have been cases reported in which organisms are widely spread throughout the body, probably by way of the blood stream. Patients may show arthritis, osteomyelitis and visceral involvement. Many die of overwhelming infections. There is no question that streptomycin is the treatment of choice and that it is a curative agent in this disease.

DR. RUFUS F. PAYNE (Rome): I am sure we all enjoyed this series of papers on the use of streptomycin in various conditions and I, of course, in particular was impressed by the paper with the use of the drug in tuberculosis. Any comments I have will be based on our experience, which in general confirms what Drs. Cruise and Aven have told you in their paper.

I would like to make one or two remarks emphasizing certain things brought out in the papers.

First, the fact that without the use of x-ray, streptomycin is a much more dramatic agent in the treatment of tuberculosis than it is with the use of x-ray. In other words, your clinical response exceeds in most instances your x-ray response. Of course we all know the final cure of tuberculosis rests on the individual's immunologic assets and if the drug is bacteriostatic enough and the individual's immunity is high enough, it may swing him over the hump and allow him to get a cure.

The second point that I would like to make is a question of resistance. That, of course, is the worst thing about the use of streptomycin in a disease such as tuberculosis, where the course is long, much longer than any other disease where multiple methods of treatment must be used and where there is always a possibility that at some future time streptomycin will be the only thing that will save a patient's life. For this reason we do not consider the use of the drug justified in any type of tuberculosis in which there is a reasonable expectation of cure with accepted procedures of other types.

The third thing is the bare possibility with the use of streptomycin in patients who go back home and are exposed to a large number of contacts that we will develop a large series of resistant strains. We do know that animal resistance has been demonstrated to last longer than a year. We don't know how much longer it will last in animals, and we know nothing about humans at this time.

In regard to toxicity, one factor which I think you should watch very carefully in giving the drug to patients is the question of whether or not they have a nitrogen retention. No doubt a patient who has kidney damage will build a higher blood level of streptomycin than a patient who doesn't have kidney damage. An older person will develop vertigo more frequently than a younger person. Exfoliative dermatitis occurs rarely. Apparently these complications are all related to the individual blood level of streptomycin more than any other factor.

The fourth thing I would like to add is this, briefly: we believe on a basis of approximately 600 or 700 patients that we have treated so far that probably one gram per day is more nearly the optimum dosage for therapeutic purposes than any other dosage. On the other hand, there is no doubt in our minds when streptomycin is used as a palliative, and it certainly should be used in painful forms of tuberculosis, enteritis, draining sites, kidney and bladder tuberculosis, and we do believe the smaller doses, half a gram a day, are probably just as efficacious to the patient.

DR. JOHN PAUL JONES (Macon): We feel that streptomycin and sulfadiazine alone should be used and is effective in all cases of influenzal meningitis regardless of the severity of the case or the age of the patient. We feel that streptomycin can be used without any fear of toxic reaction. We feel that toxic reactions to streptomycin are practically nil.

Dr. Walsh McDermott in an article on "Toxicity of Streptomycin" in the May 1947 issue of the *American Journal of Medicine* states that streptomycin is tolerated in daily doses of 1-3 grams intramuscularly for periods of one to two weeks in most cases, and in some as long as four months. The few toxic results we do see clear up shortly after cessation of treatment.

We also know that in the use of rabbit serum there is always the possibility of reaction due to hypersensitiveness. In the treatment of influenzal meningitis with streptomycin, the ideal treatment routine should be to give sufficient dose to attack the whole colony of organisms. It has been shown that in each colony there are a certain number of organisms that are resistant. However, with large enough doses given for long enough time, the colonies will be killed rapidly and you will tend to prevent the possibility of the organisms becoming resistant.

It has also been suggested in cases of streptomycin resistant organisms that they be tested for penicillin sensitivity, because some of these organisms may be sensitive to penicillin.

DR. CARL C. AVEN (closing discussion): I would like to add one or two points for emphasis.

First, I want to ask Dr. Chen a question—did he get toxic reactions in large areas with one or two grams?

In our discussion, I want to say that in one case of cervical adenitis, proven by biopsy, it responded beautifully to one-half gram daily. The patient has been treated with it for eight weeks. The woman is eight months' pregnant, and we have not seen anything regarding the use of streptomycin in pregnancy.

Another thing, we have heard so many research men say it is a dangerous drug to give in the home. Our State institutions are not able to take all the patients who apply for admission. We have resorted to the use of streptomycin in 30 cases at home. A great many patients were taught to give the drug to themselves by using the leg or some available place, and so far none has had a single abscess. I think it is justifiable, even though there are many hazards, in giving the treatment in homes. One patient had pulmonary tuberculosis, with renal and bladder infection, and other complications. We were keeping her alive on intravenous glucose injections at home. She finished her course of streptomycin last July and none of her symptoms recurred, except her cough and sputum recently became positive again after an acute respiratory infection, so we feel that we saved this girl's life by home administration of the drug.

## ANNOUNCEMENT OF VAN METER PRIZE AWARD

The American Goiter Association again offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in Madison, Wisconsin, May 26-28, 1949, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed 3,000 words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia, not later than March 15, 1949. The committee, who will review the manuscripts, is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author if it is possible for him to attend. The essay will be published in the Annual Proceedings of the Association. This will not prevent its further publication, however, in any journal selected by the author.

# SEVERE PYELONEPHRITIS COMPLICATING PREGNANCY

*Report of Case*

M. K. BAILEY, M.D.
and
CHESTER A. FORT, M.D.
*Atlanta*

Since the introduction of chemotherapeutic and antibiotic agents, pyelitis of pregnancy has not been regarded as the formidable complication that it was in the past. The once-common procedures of catheter drainage and instrumentation are now rare, and only infrequently is the urologist consulted because of an obstinate case which does not respond to drugs.

During pregnancy dilatation of the kidney pelvis and upper two-thirds of the ureter may take place. The cause of this dilatation has not been determined, but the following explanations have been offered:

1. It develops in individuals with a pre-existing stricture of the ureter.
2. The broad ligament is pushed up in the pelvis as pregnancy advances. The ligament in turn lifts the lower third of the ureter, causing the upper third to become angulated, thus producing dilatation.
3. Dilatation is caused by an impingment upon the ureter by the pregnant uterus.
4. It is produced by a secretion from the placenta.

Whatever the true cause of this dilatation, if the ureter becomes obstructed urinary stasis followed by infection of the urinary tract is the result.

Although urinary stasis is generally believed to be the most frequent cause of infection of the upper urinary tract, pyelitis may occur during pregnancy when there is no evidence of stasis. Frequently the etiologic factor cannot be demonstrated. There are, however, many common factors which predispose to infection of the urinary tract. Diseased tonsils or teeth may act as a focus of infection, increasing the possibility of

From the Department of Urology, Emory University School of Medicine.
Read before the Fulton County Medical Society, Atlanta, June 3, 1948.

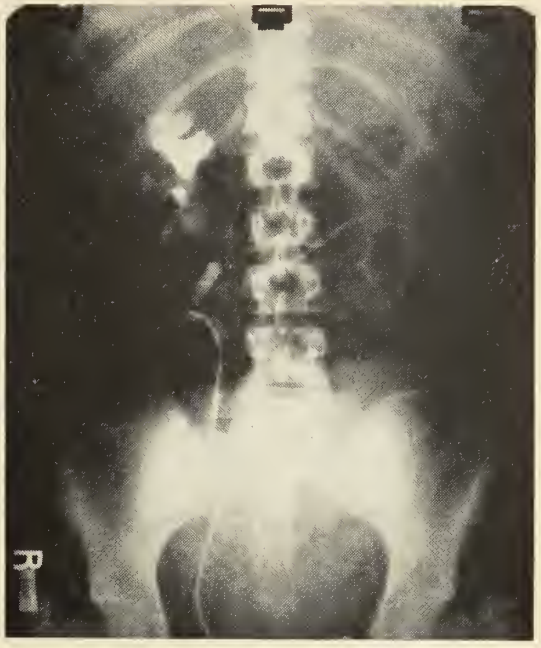



Figure 1

Roentgenogram showing sharp angulation of the right ureter.

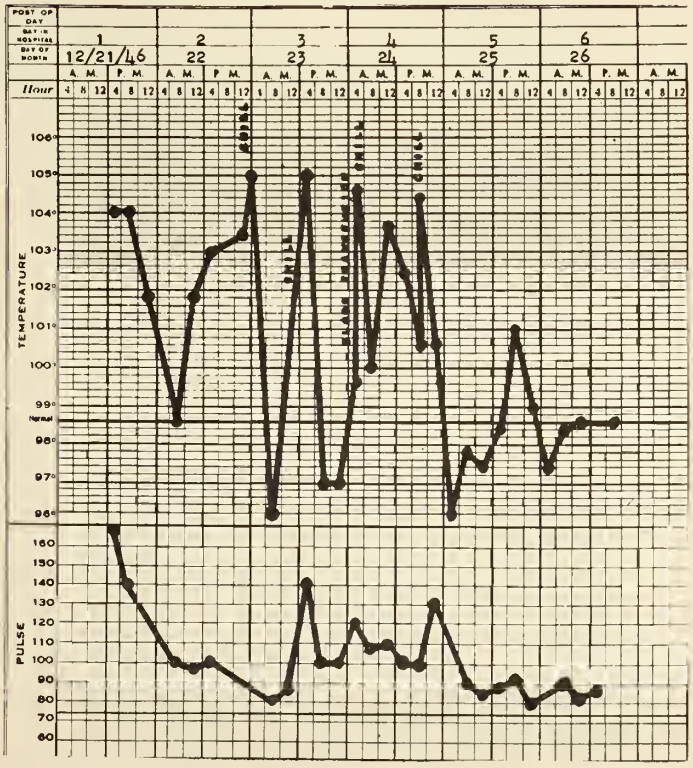



Chart 1

Type of temperature on first admission to the hospital.

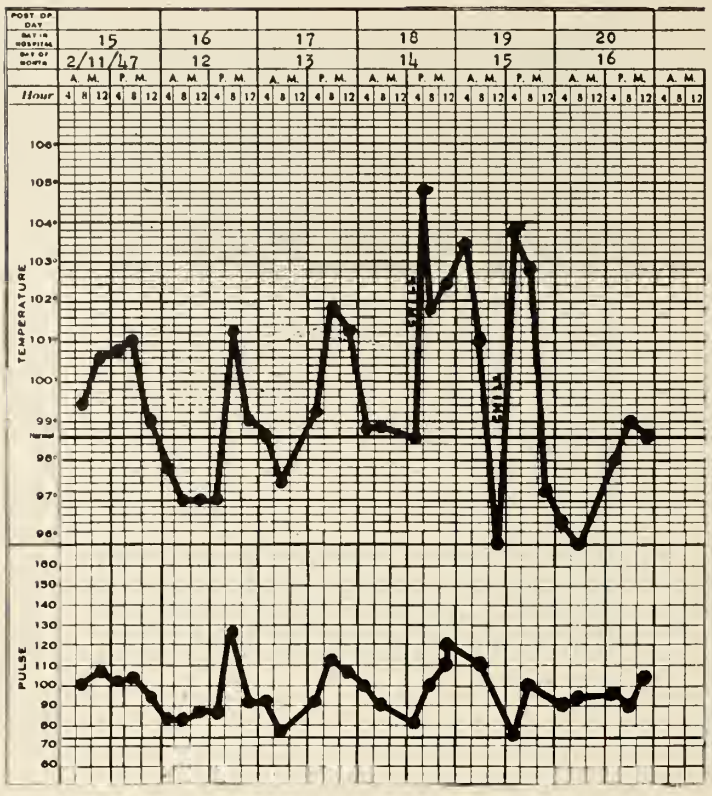



Chart 2

Type of temperature on second admission to the hospital.

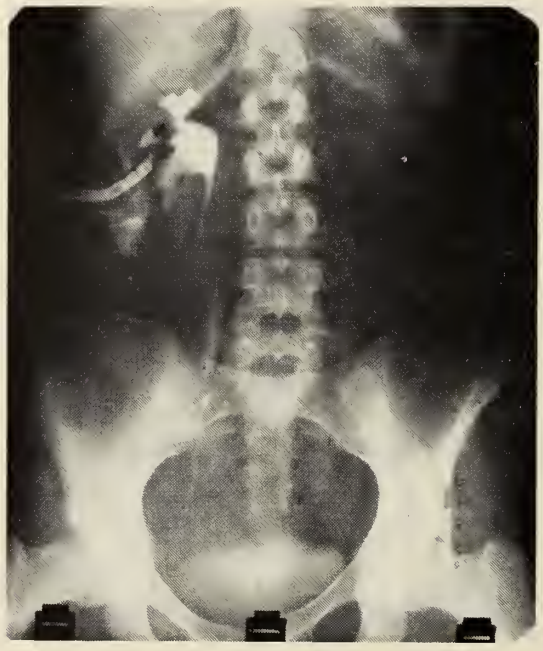


Figure 2

Pyelogram through nephrostomy tube.

pyelitis. An acute exacerbation of latent nephritis may take place during the course of pregnancy. Congenital anomalies of the urinary tract, by no means uncommon, may be a predisposing factor, as well as nephroptosis in the asthenic individual.

In the case presented here of severe pyelonephritis complicating pregnancy, it is believed that diseased tonsils were a focus of infection resulting in the infection of the urinary tract.

## CASE REPORT

Mrs. D. H., aged 19, a primipara of five months, had been in good health until six days previous to admission at Emory University Hospital on Nov. 29, 1946. At that time she had developed a sore throat and was told by her local physician that her tonsils were acutely inflamed. She developed sharp, radiating pain in her right flank, complicated by persistent nausea and vomiting, frank chills and high fever. Following the onset of these symptoms, she had marked frequency of urination, nocturia, and bladder tenesmus. She was placed in a hospital and treated with intravenous fluids, sulfadiazine and penicillin. As she was sensitive to sulfadiazine, that drug was discontinued. Her temperature rose to 105° F., accompanied daily by severe chills lasting from 30 to 60 minutes. Her condition did not improve and she was transferred to the hospital.

Examination at the time of her admission showed the following: Blood pressure readings were 130/65, temperature 100.8° F., pulse rate 74, and respiration rate 44; face was flushed and her skin was very dry. Tonsils were not enlarged or inflamed at this time. Abdomen was enlarged to the size of approximately a five-months' pregnancy; it was distended with gas. Palpation and percussion revealed generalized tenderness, most marked at the right costovertebral angle and in the right flank. There was no edema.

Blood count showed 3,530,000 red cells; 6,000 white cells, 85 per cent polymorphonuclear cells; hemoglobin 61.8 per cent (9.5 Gm.). Urinalysis showed reaction of 5.5, specific gravity 1.010, albumin 1 plus, acetone 3 plus. Microscopic study showed 75-100 pus cells and 10-15 red blood cells per high power field. Stained smear of the sediment showed gram negative bacilli.

Patient was given intravenous fluids consisting of 1500 cc. of 5 per cent glucose in distilled water, to which was added 100 mg. of ascorbic acid and 50 mg. of thiamin chloride.

Routine cystoscopy, with catheter drainage of the right kidney, carried out without anesthesia, showed generalized edema and inflammatory reaction of the bladder mucosa. Both ureteral orifices were easily identified and were well-defined. A 7F catheter was passed up the right ureter. Obstruction was encountered at about 5 cm., but was easily overcome, and the catheter was advanced to 30 cm. There was a rapid, hydronephrotic drip of thick, dirty urine. Urinalysis showed innumerable pus cells. Culture from the right ureteral catheter specimen was found to contain *Escherichia coli*. The catheter was left in position for drainage. No attempt was made to catheterize the left ureter.

Pyelogram at this time showed a capacity of 17 cc. A plain roentgenogram showed the catheter to be in normal position with no stones or other abnormalities lying along its course. The kidney pelvis and calices were not well filled, but were greatly dilated. The ureter was sharply kinked near the juncture of its upper and middle thirds, with dilatation above and below this point (Fig. 1).

The patient was instructed to force fluids by mouth, and this was supplemented from time to time by intravenous fluids. She was given penicillin, 20,000 units, every three hours. Her temperature returned to normal within 24 hours, and most of her symptoms disappeared. After 72 hours the ureteral catheter was removed. Four days later the patient was discharged from the hospital as improved.

Twelve days later this patient was re-admitted to the hospital with recurrence of symptoms. Her temperature on admission was 104° F., pulse rate 160, and respiration rate 30. There was extreme tenderness at the right costovertebral angle and in the right flank. Catheter drainage was again instituted. The urine contained many gram negative bacilli and much pus. Patient had a chill daily, and her temperature reached 105° F. (Chart 1). On the third day she was given a transfusion, and streptomycin, 0.25 Gm. every three hours, was begun and continued for ten days. She was nauseated and unable to retain anything taken by mouth. Intravenous fluids were administered, up to 4,000 cc. per 24 hours. Within 72 hours her temperature became normal. The Obstetric Department at Emory University Hospital was consulted with regard to induction of labor and termination of her pregnancy, but the opinion was that this would be a most difficult and hazardous procedure at this time, and it was not advised.

On Dec. 27, 1946, under local anesthesia, a cystoscopy and left retrograde pyelogram were done to determine the condition of the left kidney. There was some distention of the renal pelvis but no true hydronephrosis and no angulation of the ureter.

On Dec. 30, 1946, under general anesthesia, a right nephrostomy was performed. For 48 hours following this procedure the patient had a stormy course with temperature as high as 106.6° F. by rectum, but within the next 48 hours her temperature returned to normal. The nephrostomy tube drained well; the patient progressively improved and was allowed to go home on the seventeenth postoperative day.

Two weeks after the patient returned home, the nephrostomy tube was removed and sterilized by her local physician, but he was unable to replace it. The patient was again admitted to the hospital, and the tube replaced with difficulty. She had a reaction following this procedure, with an elevation of temperature which subsided after administration of streptomycin. Five days later she again developed a septic type of fever for 48 hours and temperature rose to 103° F. After another interval of five days she developed a picket-fence type of fever with temperature ranging from 101 F. to 105 F. daily (Chart 2). She was given repeated small blood transfusions with fluids intravenously. At no time did blood chemistry studies reveal any abnormality. After three weeks the patient was discharged from the hospital with her nephrostomy tube draining well and her general condition good. The nephrostomy tube was not changed; patient had no more difficulty and was delivered at term after a 12-hour labor. There were no postpartum complications and she was able to nurse her child. Four weeks after delivery, a pyelogram and ureterogram were made through the nephrostomy tube (Fig. 2). The right kidney and ureter were found to have returned to normal. The urine, however, was still infected. Nephrostomy tube was removed. The patient has been well to date.

*Summary of case*: A 19-year-old primipara of five months duration developed pyelitis of pregnancy complicated by hypronephrosis and hydroureter with sharp angulation of the right ureter at the juncture of the upper and middle thirds. It is believed that diseased tonsils were the focus of this infection. The patient did not respond to catheter drainage of the right

kidney, and consequently a right nephrostomy was performed. She had on *Escherichia coli* infection of the right kidney which was treated with streptomycin. Patient was allowed to carry fetus to term, at which time she had a normal delivery of a 6-pound 10-ounce baby. Postpartum course was uneventful. Four weeks after delivery pyelogram and ureterogram revealed that the right kidney and ureter had returned to normal. The nephrostomy tube was removed. Patient has been asymptomatic since that time.

### *Conclusions*

It is rare that pyelitis of pregnancy does not respond to chemotherapeutic and antibiotic agents. When it does not, catheter drainage should be instituted, and if this is not successful a nephrostomy should be performed. This does not affect the fetus and will permit pregnancy to continue to term.

## MASS X-RAY SURVEYS SEEN AS FUTURE CANCER WEAPON

Taking a tip from tuberculosis eradication campaigns, a Minneapolis physician recently pointed to the possibility of the mass x-ray survey for overcoming one of the biggest bugaboos of the aged—stomach cancer.

"The increasing incidence of cancer of the stomach which follows upon the aging of the population and the highly fatal character of the disease presents the medical profession with a very serious problem," Leo G. Rigler, M. D., professor and chief of the department of radiology and physical therapy, Minnesota University School of Medicine, warned members of the Illinois State Medical Society.

Speaking on "Early Diagnosis of Cancer of the Stomach" at the afternoon session of the Society's 108th annual meeting in Chicago, Dr. Rigler declared:

"While it is true that carcinoma of the stomach will be fatal in many cases, regardless of how early the diagnosis is made, in a considerable percentage a large amount of salvage could be accomplished if the diagnosis could be made at a stage when surgical procedures were feasible. Surgery of the stomach has advanced to the point where it is possible to cure what were previously considered difficult or hopeless cases."

He pointed out that cancer of the stomach is insidious in its early stages and frequently produces no symptoms. X-ray examination is therefore the only practical method for early diagnosis.

"Obviously, any individual with even the mildest symptoms of a gastric disorder should be subjected to x-ray examination," Dr. Rigler said. "Another procedure would embody the routine x-ray examination of the stomach in symptomless individuals just as is now done in mass surveys to discover diseases of the lungs. Such an undertaking is not presently practical for the whole population, because of the time-consuming, expensive character of x-ray examination of the stomach.

"Nevertheless, experimental trials of small groups of cases have been undertaken with a view toward determining the value and feasibility of the procedure.

"Although these studies have demonstrated the possibility of the early diagnosis of cancer of the stomach before the appearance of symptoms, by means of x-ray examinations, the method has not yet been simplified to a point where it could be used for large groups of the population.

"Pilot studies need to be continued using small selected groups until the procedure is modified so that it can be applied to greater numbers of the population."

## HORMONE PRODUCES ONLY TEMPORARY RELIEF OF CANCER

Response of patients with advanced breast cancer to testosterone propionate, the form of the male hormone, testosterone, which is widely used in therapy, is transient and unpredictable, say Max Cutler, M.D., and Melvin Schlemenson, M.D., of the Chicago Tumor Institute, Chicago.

Writing in the September 18 issue of *The Journal of the American Medical Association*, the physicians report the treatment of 20 advanced breast cancer patients with the drug.

"No evidence that testosterone therapy can cure advanced breast cancer was observed, and palliative results can be anticipated in only a relatively small number of patients," the physicians say.

"Twelve showed no significant improvement, and 11 of these died within one year after the beginning of the treatment. Four patients showed transient improvement of short duration. The palliative effects were striking in four cases, but the duration of response was limited.

"From the available evidence it seems advisable to withhold testosterone therapy in advanced breast cancer until other well established procedures have reached the limits of their usefulness," they report.

## X-RAY PROVES HELPFUL IN TREATMENT OF THYROID CONDITION

A relatively uncommon condition, known as thyroiditis, a toxic reaction due to an inflammatory process in the thyroid gland, responds "promptly and completely" to x-ray treatment, two Cleveland doctors told the 49th annual meeting of the American Roentgen Ray Society in Chicago recently.

In a paper read at the convention, which was attended by x-ray and radium specialists from every state in the union, the doctors said that most patients suffering from the disease were relieved of pain and tenderness after two or three treatments, the severity of other symptoms were reduced and the course of the disease shortened.

The doctors were John D. Osmond, Jr., M.D., former fellow in therapeutic radiology at the Cleveland Clinic, and U. V. Portmann, M D., who is connected with the Cleveland Clinic and the Frank E. Bunts Educational Institute, Cleveland.

"Recurrence of symptoms in mild form developed in a few patients and were relieved by a second course of x-ray treatment," the doctors said, adding: "We have observed no deleterious effects from treatment and the dosage is too small to cause skin reactions."

The doctors studied and treated 93 cases of subacute thyroiditis. Fifty-five of the patients received x-ray treatments and, of this number, 40 were cured with one treatment. Six were listed as improved and later cured after a second course; one had recurrences and no second course was given, and no information was available about the results of treatment in eight patients.

The disease is believed to be caused by some form of virus, and the doctors' experiments indicate that the viruses are inactivated by x-ray radiation.

About one-third of the patients treated gave a history of recent mild upper respiraotry disease. The principal complaints were pain in the neck and throat. It was quite characteristic of the pain to radiate to one or both ears. More women are affected than men, and the age incidence varied from 20 to 63 years. The extremes of duration are from two days to a year. Most of the patients remained well enough to carry on their ordinary activities although some were incapacitated and had to be hospitalized.

## CANCER COMMISSION, MEDICAL ASSOCIATION OF GEORGIA

The conquest of cancer continues to be one of the bigger problems confronting the medical profession, and there is very little comfort for all concerned when we realize that malignant disease accounts for one seventh of our deaths. The profession, and the State as a whole, are fortunate indeed that much progress has been made towards cancer control under the leadership of Dr. J. L. Campbell and his associates and among other allied groups, such as the American Cancer Society, Georgia Division. Surveys have been made, detection centers have been established, and the public has been awakened to the problem.

The unfortunate death of Dr. Campbell has to some extent left our activities behind schedule, and we realize that his position will be hard to fill, and his leadership sorely missed; however, the Cancer Commission of the Medical Association of Georgia will endeavor to carry on in an honest effort to do its very best in what we believe to be a great humanitarian undertaking.

This fall we plan to take part in the evening programs of the Academy of Medicine, Fulton County, where several papers will be presented on cancer diagnosis and treatment. One interesting program has been arranged and prominent cancer specialists will take part. A tentative date has been made for the evening of November 18. Further notice will be given out, and we hope that the attendance at this meeting will be large.

I, therefore, call upon all members of the Cancer Commission for cooperation and help, and it is hoped that during the coming months every one will be called upon collectively and individually to take a hand in making Georgia one of the most active states to be engaged in the conquest of a time dreaded malady.

J. C. Norris, M.D., *Chairman*,
Cancer Commission,
Medical Association of Georgia.

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

OCTOBER, 1948

## COUNCIL APPROVES PREPAYMENT MEDICAL CARE PLAN

On September 22 the Council of the Medical Association of Georgia held a call meeting at the Academy of Medicine, Atlanta, to receive the report of the State Committee on Prepayment Medical Care Plans, and to attend to any other business properly brought before the assembly.

The Committee on Prepayment Medical Care Plans had met all day the previous day and had had the advice of many persons interested in prepayment medical care plans. Their report indicated that perhaps a simple plan to start with, with amendments later, would be best for our State. The Council approved the recommendations of the committee and designated, on recommendation of the committee, the ten councilors as a temporary board to facilitate putting the plan in operation. Later, when the District Medical Societies meet, it is planned to have each District Medical Society of the State elect one member to serve on a permanent board whose duty will be to develop and guide insofar as possible all prepayment medical care plans for Georgia.

With the organization of the newly-created board to administer and study medical care plans, its secretary was requested to notify the insurance carriers of Georgia that the plan for our State for the present would be patterned after the Tenessee plan; namely, it would be an indemnity plan, and would be handled by all authorized insurance companies in the State whose interest was in health and accident insurance, provided these companies approved certain principles outlined by the board representing the Medical Association of Georgia.

To augment the proposed indemnity plan with other coverages later, the board requested the Committee on Public Policy and Legislation of the Medical Association of Georgia to seek legislative approval of certain amendments to the State Group Hospitalization Law. If and when such amendments are enacted into law, the eighteen hospital insurance groups operating in Georgia now, and other groups as well, may function as non-profit organizations to underwrite such insurance, either as an indemnity contract or as a so-called service contract.

The secretary for the board representing the Medical Association of Georgia is Dr. H. L. Cheves, of Union Point. Persons wishing further information regarding medical care insurance plans should address their communications to him.

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## PROVE AUREOMYCIN VALUABLE AGAINST FOUR DISEASES

Aureomycin, the new golden-colored antibiotic drug, is being used to treat patients with Rocky Mountain spotted fever of the eastern type, undulant fever, typhoid fever, and certain infections of the urinary tract, report five researchers from the Department of Preventive Medicine, Johns Hopkins University School of Medicine, Baltimore.

Writing in the September 11 issue of *The Journal of the American Medical Association*, the researchers—Morton S. Bryer, M.D.; Emanuel B. Schoenbach, M.D.; Caroline A. Chandler, M.D.; Eleanor A. Bliss; and Perrin H. Long, M.D.—report on clinical tests in the treatment of these diseases with aureomycin and on tests with animals to determine the effectiveness of the drug against other diseases.

Aureomycin is one of the newer drugs produced from molds. It is manufactured from the chemicals made by a thread-shaped mold that belongs to the group that produces streptomycin.

Five patients with Rocky Mountain spotted fever of the eastern type who were treated on the third to the fifth day of illness had no fever and showed no symptoms of the disease within 12 to 72 hours.

A patient with chronic undulant fever had no fever three days after aureomycin therapy was begun. Laboratory cultures of the patient's blood, which had been repeatedly positive for the disease, became sterile 48 hours after treatment with aureomycin was begun. This patient has shown no fever and no symptoms for more than two months, and blood cultures have remained sterile for the same length of time.

Two typhoid fever patients treated with aureomycin showed "favorable initial responses."

Infections of the urinary tract in two patients "were sterilized, and evidence of inflammation disappeared when patients were treated with aureomycin by mouth," the article says.

Aureomycin was administered to patients in the clinical tests by mouth in six doses daily and by injection four times daily. The injections were "tolerated but with signs of moderate local irritation," according to the researchers.

Experiments with animals and the clinical results show that aureomycin prevents the growth of and kills numerous bacteria of different types, they add.

Although tests show that aureomycin does not protect animals against some bacteria which cause pneumonia, the drug protects mice against a streptococcus organism of the family to which most bacteria found in streptococcus infections belong, the researchers say.

## ANTIVIVISECTIONISTS THREATEN MEDICAL RESEARCH

Sincere but misguided people who support antivivisection and the shrewd promoters who make a living from the movement are a real threat to medical research, points out an editorial which appears in the September 11 issue of *The Journal of the American Medical Association.*

The editorial follows in part:

"The antivivisectionists love publicity pointed to their angle, but screams of anguish and tearing of hair will soon be reflected in the antivivisectionist publications after the recent (July 24) article in the Saturday Evening Post, 'They're Trifling with Your Life.'

"This article designates the antivivisectionists as 'an obscure cult of sincere but misguided Americans—spurred by shrewd promoters—(which) now threatens to wipe out the techniques of medical research that have saved millions from horrible deaths.'

"The vast majority of antivivisectionists are apparently sincere but misguided. They are kindly people who love animals perhaps too well. Their noble sentiments make them easy prey to the shrewd promoter who makes his living by claiming that animals in laboratories suffer needless pain, and that money is needed to stop animal experimentation. The people who support the antivivisectionist movement have never been in laboratories and have only the vaguest concept of what constitutes scientific research.

"The combination of 'sentimental money,' as the gifts to antivivisectionism have been termed, plus shrewd promotion, embodies a real threat to medical research. Year after year the antivivisectionists have had bills introduced into the Congress of the United States and into state legislatures 'exempting' the dog from service in the medical research laboratory. Such bills, one of which came perilously near enactment in a New York legislature, serve as publicity springboards even when they fail of enactment. If the so-called dog bill should ever go through the Congress in a preadjournment legislative jam the event would be a catastrophe. Although these bills in the Congress apply only to the District of Columbia, they would serve, if passed, as patterns to be copied in state legislatures.

"In addition to attempting to effect state and national legisltaion, the antivivisectionists, by creating uproar and emotional tension, have succeeded in diverting many stray dogs which used to be delivered to medical schools to the gas chamber at the dog pound, thus increasing the difficulties experienced by medical schools in procuring dogs for study. Finally, the antivivisectionists admit that the dog is used as their symbol because of mankind's universal love for dogs. If they once succeed in excluding dogs from use for medical research they will proceed to broaden this ban to include, first, cats, and gradually other animals.

"The Saturday Evening Post has done an important and significant service to the health of the American people in exposing the threat of antivivisectionism."

## TUMORS MAY CAUSE HIGH BLOOD PRESSURE

High blood pressure in some persons appears to be caused by a certain type of tumor found in the adrenal and coccygeal glands, along the nerves, and in other organs, says George F. Cahill, M.D., of the J. Bentley Squier Urological Clinic and the Department of Urology, College of Physicians and Surgeons, Columbia University, New York.

Writing in the September 18 issue of *The Journal of the American Medical Association,* Dr. Cahill points out that this kind of high blood pressure can be cured by locating the tumor with x-ray and removing it by surgery.

Cases which Dr. Cahill has treated show that this type of high blood pressure seems to result from the release of adrenalin from these tumors. It occurs both in children and in adults and is sometimes difficult to distinguish from hyperthyroidism, hysteria, and psychoneurosis, he says. It may be continuous or may occur only in acute attacks, the article point out.

Symptoms consist of a pounding headache, pronounced beating of the heart, constriction

of the hands and feet, and pain just above the stomach, according to Dr. Cahill.

Commenting upon Dr. Cahill's article, Dr. Earl E. Ewert of Boston says in the same issue of The Journal that persons who appear to have typical seisures of epilepsy may also be suffering from this type of tumor.

## PENICILLIN AIDS IN TREATMENT OF TETANUS

Penicillin is a valuable aid in the treatment of tetanus, commonly known as lockjaw, according to three physicians of San Juan, Puerto Rico.

Writing in the September 18 issue of *The Journal of the American Medical Association*, the physicians—R. S. Diaz-Rivera, Luis R. Deliz, and Jose Berio-Suarez—describe a study of 59 patients who were treated for tetanus at the San Juan City Hospital.

Penicillin should be given with the tetanus antitoxin, they say. The mortality rate for all patients treated was more than 20 per cent, and the mortality rate of patients who were given enough penicillin to constitute a "fair trial" of the drug was nearly 18 per cent.

This study shows that tetanus has a much higher mortality rate among Negroes than among white persons. The rate among white persons was slightly more than 15 per cent, while the rate among Negroes was 30 per cent.

## FIND BLOOD TRANSFUSIONS EFFECTIVE FOR HEMOPHILIA

Blood transfusions are effective in controlling hemophilia over long periods of time, report two researchers from the Medical Research Laboratories, Beth Israel Hospital and the Department of Medicine, Harvard Medical School, Boston.

Hemophilia is an inherited condition in which the blood does not clot readily.

Writing in the September 18 issue of *The Journal of the American Medical Association*, the researchers—Benjamin Alexander, M.D., and Greta Landwehr, B.S.—say that "observations on patients treated over a period of 10 to 20 months indicate that this approach provides amelioration of the bleeding tendency."

Hemophilia occurs mostly in men, although women "carry" the disease and transmit it to to their sons. Slight accidents, which would have little effect on a normal person, may cause fatal hemorrhage in persons with hemophilia.

Four patients with the disease were given blood plasma three to four times weekly by the researchers. The blood transfusions were always followed by a drop to normal or nearly normal in the time required for the patients' blood to clot, says the article. Two of the patients treated who had not been able to take part in active sports played baseball and basketball after receiving blood plasma.

Of the 10 reactions which the researchers observed during the study, only four were moderately severe or severe with symptoms of chills, drop in blood pressure, and headache. This incidence of reactions was only slightly more than 1 per cent, the researchers say. One patient developed jaundice, probably from the transfusions, they believe.

Blood plasma is effective against hemophilia only as long as transfusions continue to be given, and the treatment does not cure the underlying condition of the disease, the article emphasizes. Yet this treatment is the first reported which is effective in controlling hemophilia over a long period of time, the researchers point out.

## DR. ALFRED BLALOCK, WHO PERFECTED "BLUE BABY" OPERATION, ADDRESSES MEETING

Dr. Alfred Blalock, professor and director of surgery at Johns Hopkins Hospital in Baltimore, who performed the first epoch-making operation on a "blue baby" late in 1944, appeared before more than 1,000 x-ray specialists in Chicago Sept. 14, 1948, and said the preferred age for such operations is between two and 12 years.

Dr. Blalock and Dr. C. Rollins Hanlon, also of Johns Hopkins, presented a paper on the surgical treatment of heart defects at birth before the annual meeting of the American Roentgen Ray Society. More than 1,000 physicians, specializing in x-ray and radium, attended the session.

In their paper, the doctors said that "among the reasons for the disinclination to operate on infants is the difficulty in diagnosis."

The operation, which Dr. Blalock described, gives new life and hope to parents of the doomed "blue baby" to whom medical science had heretofore offered neither remedy nor hope. When the first operation was successfully performed, a dream, backed by years of difficult experiments, had come true.

In "blue babies" a malformed heart causes insufficient oxygen in the blood, resulting in a bluish color to the lips and skin. This deficiency is due to the failure of the blood to obtain adequate oxygen as it flows through the lungs.

The doctors said in their paper that the preoperative and postoperative care of most patients is not very difficult or complicated.

Dr. Blalock and his associates have operated on 610 cyanotic patients. The total number of patients who have died is 108, an over-all mortality of 17.7 per cent. Nearly all of the patients, the doctors explained, were "extremely ill" before the operation was performed.

"The majority of patients who have survived the operative procedure are improved," the doctors said. "The clubbing of the fingers and toes usually recedes gradually. The most notable alteration, however, is the lessening of the patient's incapacity since many patients who

could walk only a few steps before operation can carry on practically normal activity."

Twenty-seven of the 108 deaths occurred during operation, 68 in the postoperative period, and 13 after discharge from the hospital. "Some deaths," the paper said, "occurred before the chest had been opened by the surgeons. A few of the deaths were unrelated to the operative procedure; for example, a child from France died of meningitis after returning home."

The doctors explained that 13 of the patients died after discharge from the hospital from varied causes, some of which were unrelated to the operation. Among the causes of death were heart failure, coronary occlusion, pneumonia and infections, and cerebral accidents.

"The mortality rate," the doctors explained, "depends to a great extent upon the principles which one adopts in regard to operability. We have taken the position that almost all cyanotic patients who are believed to have an inadequate pulmonary blood flow and who are significantly incapacitated should be operated on."

## GLAUCOMA

Of all the diseases that affect the eye, glaucoma is one of the most difficult to identify because of its deceitful character. And yet nearly every one blinded by glaucoma could have retained some vision at least, if a doctor had been called early enough, it is pointed out in a HEALTH TALK issued by the Educational Committee of the Illinois State Medical Society.

The structure of the eye, including iris, retina, lens and accessory muscles, a complex mechanism which conveys images to the brain, may be compared to a camera. The camera however is dry, while the eyeball contains two humors, the aqueous and the vitreous. The aqueous flows in and out of the forepart of the eye by way of tiny canals. The aqueous is involved in glaucoma. Normally the proper amount of this fluid passes in and out of the eye. In glaucoma the channels become blocked and the pressure within the eyeball increases. The eyeball distends until it is extremely hard. The pressure affects the optic nerve and shuts off the blood vessels serving the eye, conditions which, if allowed to progress without treatment, result in blindness.

A person developing glaucoma usually notices mild pains in and around the eyes. Vision may be blurred; the eyes may turn red and produce copious tears. There may be headache. Rainbows around electric lights and difficulty in finding a seat in a darkened movie may be the first manifestations of the disease. The symptoms may disappear for several weeks or even months. When they reappear, there may be dizziness and nausea, vision will be hazy and everything will seem dark and dull.

The person with chronic glaucoma usually has a one-sided headache or a heavy feeling in his eyes. Here, too, there may be difficulty in moving about in the dark. Some persons develop glaucoma without experiencing any symptoms and become nearly blind before they are aware that their eyes are diseased.

In glaucoma the outer rim of the field of vision is affected first and the disturbance gradually works toward the center, permitting the patient to see straight ahead, but destroying vision to the side.

The cause of glaucoma is not known. It seems to develop in persons after middle age, causing eleven per cent of blindness in adults. Because of its emotional aspect, patients with the disease are urged to avoid intense emotional situations, undue worry or anxiety. The disease is treated with drugs which lower the pressure in the eye. If these fail, surgery may be employed to establish proper drainage and to keep the pressure permanently low. The condition is not helped by wearing glasses.

Persons who have reached 40 should have a careful examination of the eyes periodically, even though no trouble has previously existed.

Preserve your eyesight. Let your eye doctor determine that your eyes are free of this disease, which, if neglected, means that blindness is inevitable.

## RELIEF IN HAY FEVER

Only persons who suffer from hay fever know the complete misery caused by this condition, the Educational Committee of the Illinois State Medical Society observes in a *Health Talk*. The commonest form of allergy, hay fever, is characterized by symptoms similar to those of the common cold, but more intense. The respiratory tract and eyes are mostly affected, in such forms as swelling of the membrane lining of the nose, and throat, in many cases so severely that breathing is difficult. There is also sneezing and "sniffling" and similar irritation of and "weeping" from the eyes.

Allergy is a condition of the body in which it reacts unfavorably to contact with some substances which produces no trouble in non-allergic conditions. Hay fever patients are allergic to one or more of many plant pollens, usually grass or weeds. If the culprit is determined through a series of skin or "patch" tests, an attempt to desensitize the patient may be instituted by the doctor through repeated injections of the causative agent. This "immunity," however, is not an overnight procedure, but sometimes takes months, even years. A wise person will not delay until the season approaches, but will begin early and continue his injections at regular intervals until an immunity has been established.

Pyribenzamine and benadryl are two new drugs that have proved beneficial to some hay fever patients, particularly in patients with mild symptoms. These drugs are called anti-histamine drugs. That is, they are believed to combat the agent considered responsible for an allergic reaction in the human body. This agent is histamine, a chemical normally present in body tissue but which, through some abnormality or defect, renders some persons sensitive or allergic.

Pyribenzamine and benadryl, however, may produce unpleasant effects, such as nausea, vomiting, headaches, poor coordination and drowsiness. That is why users of either drug must be under the careful supervision of a physician at all times. If these reactions show up in the driver of a car, for example, a traffic accident may result. Neither drug is a cure; they merely control symptoms as long as they are used.

Aside from the use of these drugs, victims can do some other things to help themselves. Financially able persons can go to an area where the pollen count is low. Some patients find it helpful to keep doors and windows closed to avoid drafts and breezes, causing the pollens to settle to the floor instead of floating through the air. Some mechanical devices have proved helpful, such as a filter in the window or a breathing mask. Air-conditioning units keep the pollen count down.

Hay fever sufferers should avoid drafts and chills. In the sensitive person, loss of body heat is apt to cause an abnormal swelling of tissues in the nose, resulting in constant "sniffling" and sneezing. Iced drinks and cool baths should also be avoided.

The complexity of allergy, the difficulty of treating it, the dangers of the drugs used, all are compelling arguments why the hay fever patient should be continuously under the care of a physician. If there is any relief possible in your condition, he will know how to use it.

## WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

### AUXILIARY NEWS

Wonder if you've ever thought seriously along these well known lines: that it is a psychologic fact that people of like-minds are most congenial and therefore most companionable.

We all like best to talk about things with which we are familiar, and we prefer talking with people who have similar interests and understandings. Did you ever notice two mothers talking about their babies, or two fishermen discussing their "catch"?

Certainly it isn't very interesting to a doctor to talk to his wife about the Rh factor when she doesn't know the Rh factor from a couple of insects. Mental companionship is stronger and more lasting than physical. So the wise wife will post herself, at least to some degree, along medical lines so that she may enter into an intelligent and understanding conversation with her husband. Much of the necessary data for such needed information may be had by reading *The Bulletin of the Woman's Auxiliary to the A.M.A.*

Then, too, a doctor's wife should be a member of a medical auxiliary, and she should inform herself concerning the organization to which she belongs. Its ideals, aims, needs and its plan of work should be considered and understood. Many of these plans and problems are presented in *The Bulletin.* Ways and means are suggested and solutions are discussed.

Yet another reason for subscribing to *The Bulletin* is the natural desire to see Georgia holding a worthy place on the National Auxiliary's roll of subscribers. So, subscribe now!

*The Bulletin* is published quarterly, and may be had for $1.00 per year. Please send your subscription to your local chairman or to Mrs. W. L. Curtis, State chairman, 302 W. Rugby Avenue, College Park, Ga.

MRS. W. L. CURTIS, *Chairman*
*The Bulletin,*
Medical Auxiliary, A.M.A.

# GEORGIA DEPARTMENT OF PUBLIC HEALTH

## SILICOSIS CONTROL IN THE GEORGIA GRANITE INDUSTRIES

*A Progress Report*

Georgia ranks third among the granite-producing states of the country. This is a very gratifying economic fact but a potential public health menace. Granite is known to be roughly 35 per cent *free silica* (quartz), and *free* or *uncombined silica* will produce the specific pneumonconiosis known as *silicosis*.

It is generally held that eight to ten or more years of exposure are required for a significant degree of silicosis to develop. Occasional exceptions to this rule have been noted under unusual circumstances of excessively great exposure. The typical action of silica dust upon the lungs results in the production of nodules, distributed throughout both lungs, producing a characteristic appearance on the x-ray film. Silicosis may manifest itself by cough, dyspnea, pleuritic pains, deficient chest expansion, dullness, diminished resonance, pleurisy, hemoptysis. There may, however, be pronounced x-ray findings without any clinical symptoms. The reverse is also sometimes true, dyspnea may be severe with comparatively little x-ray evidence. Victims of silicosis frequently die with tuberculosis. It may be that silica stimulates the tuberculous infection. At any rate, silicosis superimposed on tuberculosis greatly increases the gravity of the disease.

Before the establishment of the *Industrial Hygiene Service* in 1941, control equipment and methods to prevent production of dust in the breathing zone of the workers were practically nonexistent in Georgia despite the fact that 30 per cent of the granite dimension stone and 18 per cent of the crushed and broken granite of the United States were produced here. The Workman's Compensation law provided for accidents only, while neighboring states had strict occupational disease compensation laws requiring physical examinations. Workers with silicosis who were considered unemployable in the granite industry in other states drifted into Georgia for employment, adding to the silicosis problems here.

A chest x-ray survey of 172 of the 1,700 granite workers in Elbert County in 1940 had indicated a high incidence of silicosis (73.7 per cent, although only six cases, or 4.4 per cent, were third-stage silicotics); and also a high incidence of tuberculosis (18.3 per cent).

When the *Industrial Hygiene Service* of the Georgia Department of Public Health was established in 1941, the dust hazard of the granite industry was the first major industrial hygiene problem to be attacked. In November 1941 arrangements were made for a comprehensive dust study throughout the Elbert County industry as soon as equipment arrived. Pearl Harbor, however, put a temporary halt to plans for a granite industry survey, as the industry was considered not essential to the war effort. Another attempt in 1944, at the request of local physicians and the union, was likewise thwarted when the War Production Board decreed that exhaust ventilating and other control equipment could not be released to non-essential industries. The question was debated as to what benefits might be derived from conducting dust studies even though the installation of control equipment was unattainable at the time. Opinion appeared to be unanimous that such studies would be more or less wasted effort. Such studies are usually done to show the need for and justify the expense of proposed installations. However, in this case all were in agreement that the installations were needed. No one questioned that dangerous dust concentrations existed at the time, and that actual cases of silicosis had resulted from exposure, and that additional cases would occur unless conditions were changed. Previous experience in other states provided sufficient guides as to what kinds of equipment were needed and when they should be installed.

In the meantime, the continuing efforts of the labor union finally resulted in the enactment of an Occupational Disease Amendment to the Workman's Compensation law which became effective May 1, 1946. The law requires a physical examination of all new employees within thirty days of the time they are hired, but contains no provision for examining workers already employed. The granite cutters' union became immediately suspicious of the intent of the physical examinations. They feared discrimination by employers against workers found to have silicosis. The union ruled that no union member should submit to chest x-ray examination except as required by law, subject to $50.00 fine. Upon learning of the confidentiality of x-ray results, however, the union has since become one of the greatest proponents of the community-wide x-ray and blood test surveys now being conducted throughout Georgia by the State Health Department.

Further success for the antisilicosis campaign was assured by a granite cutters union contract with plant management in 1946. The contract provides for "all dust-creating machinery and each individual banker (work bench) to be equipped with suction devices of a type ap-

proved by the Industrial Hygiene Division of the State Board of Health of the State of Georgia, when available. Dust filters will be installed for dust suction devices when ordered by the State Board of Health." This was followed in 1947 by a city ordinance requiring dust collectors on all granite dust exhaust systems.

Restrictions on procurement of control equipment were lifted in 1945, and dust control installations have proceeded rapidly in most of the larger monument sheds since that time. Consequently, the long deferred intensive study by the Industrial Hygiene Division actually got under way in 1947.

There are two distinct granite industries in Georgia, *monument production* and *stone crushing*. Probably nearly 2,000 employees earn their living in these industries. The *monument* industry is the larger of the two types. Most of the granite for this industry is quarried in the Elberton area, because Elberton granite has a definite grain which is necessary for shaping monuments. The majority of granite finishing sheds are located in and around the city of Elberton; a number of other sheds are located in several towns and cities of the State, all depending upon the Elberton area for their supply of granite.

At least 35 of the 52 known monument companies have installed dust controls. Others plan to make such installations as soon as possible. A few small concerns, for financial or other reasons, will probably go out of business rather than make the additional investment. The controlled establishments employ 802 of the estimated 1195 individuals in the monument industry. Control methods employed include local exhaust ventilation, wet methods, and personal respiratory protective equipment. In nearly all situations except sand blasting, local exhaust ventilation systems or wet methods have reduced the atmospheric dust concentrations to values well below the accepted maximum allowable concentration for an eight-hour work day. The sand blast process must be isolated in a separate room, and the worker protected by wearing a supplied air respirator.

*Granite crushing* centers are largely in the Stone Mountain area near Atlanta. Generally the Stone Mountain granite has no grain, which makes it undesirable for shaping into monuments. Hence it is used for curb stones, building stones, and crushed stone. Crushing plants are a source of a tremendous amount of granite dust. Unfortunately, however, the owners and operators of these plants are not as well informed about the dangers of silicosis. Stone crushing on a large scale with power equipment is a fairly recent development in Georgia, so that not many workers have been exposed to this source of dust for over ten years. Immediate control of this dust exposure is imperative, however, if serious silicosis among these workers is to be prevented. Probably many workers are nearing the end of the long exposure period which typically preceeds the disease.

In Elbert County final commitments for a county-wide chest x-ray and blood test survey were obtained early in 1948, largely as a result of the great interest and continued prodding by the Granite Cutters Union, but spurred also by industrial management, civic groups, and the like. The survey is unanimously endorsed by the County Medical Society. The survey will be conducted by the County Health Department with the assistance of the State Health Department, as a part of the continuous State-wide Tuberculosis-Venereal Disease case finding program. This Elbert County survey will be conducted in the summer of 1949, the earliest date which the survey team had open when the commitment was obtained. It is anticipated that the survey findings will give the most accurate measure yet obtained of the real extent of the silicosis problem in this area.

Similar surveys already conducted in other areas of the State have included a small number of granite workers, and negotiations are underway for a chest x-ray survey of granite workers in the Stone Mountain area. The natural hesitation on the part of some workers to submit to examination for fear of losing their job is usually overcome by the assurance that the individual findings in each case are kept strictly confidential between the Health Department, the individual concerned, and the physician of his choice.

The prevention of silicosis in our granite industries is a responsibility of industrial medicine. It depends upon two major factors: first, the control of the working environment, and second, periodic examinations of the individuals exposed to risk. Workers with any evidence of tuberculosis or silicosis should be removed from hazardous dust concentrations. With continuing support of the medical profession, industrial management, and the workers, it is hoped that before too long every job in this industry will be made safe.

L. M. PETRIE, M.D., *Director*,
Division of Industrial Hygiene,
Georgia Department of Public Health.

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## WASHINGTON CHEST SURVEY UNCOVERS MORE THAN 5,000 CASES OF T. B.

Dr. Arthur C. Christie, of Washington, D. C., told the American Roentgen Ray Society in convention Sept. 15, 1948, that more than 5,000 cases of unsuspected tuberculosis were found in the mass tuberculosis chest survey which was carried out in the nation's capital from January 12 to July 1, 1948.

"A significant fact disclosed by the Washington survey," he said in a paper delivered before the society meeting in Chicago, "is the relation of the total number of cases of tuberculosis disclosed by the survey to the cases registered at the Washington Health Department as tuberculosis. Of the more than 6,000 cases, only 567 were on the tuberculosis registry, leaving about

5,600 cases previously unknown to the Health Department, of which number 83 to 85 per cent are in a minimal stage and about 10 per cent only moderately advanced."

Dr. Christie said that a total of 503,398 persons were examined in the survey, but that a complete analysis of the results will not be available for several months. He added that his statistics were subject to future revision.

In discussing the value of such a survey, the largest ever made, Dr. Christie said:

"The question has been raised frequently as to the practical value of the mass survey method, which requires the examination of such a large number of non-tuberculosis individuals to screen out a relatively small percentage of cases of tuberculosis. There seems to be little doubt of the value of a method which discloses over 5,000 people in a city the size of Washington who have tuberculosis, previously unknown, the great majority of them at an early stage of the disease.

"It is true that examination of selected groups of the population in which the incidence of tuberculosis is known to be high will yield much higher percentages of positive cases.

"The practice of examining the chest of all patients who are admitted to general hospitals is proving a fruitful case-finding method, and very recently reports have been made of the high incidence of tuberculosis among the patients who seek the advice of general practitioners.

"Any method that discloses cases of tuberculosis is valuable and should be used wherever practicable. There is little doubt, however, that the final control of tuberculosis will depend upon well organized, systematic mass surveys supplemented by persistent examination of selected groups in which the incidence is known to be high.

"The aspect of the problem which needs the greatest emphasis at the present time is the follow-up, management, and treatment of the individual patient once the disease is discovered. It must be increasingly appreciated that the finding of the case is only the beginning of a mass survey.

"The local Health Department must have a central place in tuberculosis control for the registry, hospitalization, and laboratory service for the tuberculosis patient, but the tendency to throw the entire responsibility for follow-up and management upon it must be combatted."

Dr. Christie explained to the 1,000 x-ray specialists gathered in Chicago for their annual convention the organizational setup for the Washington mass chest survey.

"The survey," he said, "disclosed the presence of a considerable number of lesions within the chest other than tuberculosis."

He said there were 1,540 cases which showed definite abnormalities in the size and contour of the heart.

"All of these," he added, "were referred to their physicians for further study. There were 2,269 cases, excluding the cardiacs, which showed lesions other than tuberculosis. No definite statistics are available regarding these but some were diagnosed as bronchiogenic carcinoma, some as lymphoblastoma, two as solitary bronchiogenic cysts, and several as bronchiectasis. The survey thus has a considerable value in disclosing diseases other than tuberculosis."

Dr. Christie urged physicians, general practitioners and specialists alike, to take a more active community interest in establishing adequate hospital and public health department facilities and personnel for the care of tuberculosis patients.

## PROBLEM CHILD MAY HAVE BRAIN INJURY

Many "problem" children actually are suffering from brain injuries present since birth, Catherine S. Amatruda, M. D., recently told members of the Illinois State Medical Society.

Dr. Amatruda, of the Clinic of Child Development, Yale University School of Medicine, pointed out the need for careful diagnosis of children with behavior problems in an address before the closing session of the medical society's 108th annual meeting in Chicago.

"Frank cerebral palsy with its crippling spasticity and athetosis (constant recurring series of awkward hand and foot movements) is recognized without much difficulty," she observed. "There is a recent new impetus toward improved and expanded facilities for the treatment, rehabilitation and education of this handicapped group."

"The child with a minimal injury, however, is usually undiagnosed or misdiagnosed. His handicaps go unrecognized or misinterpreted."

Infants with minimal brain injuries, she noted, have difficulties in feeding which "may persist for months," and some degree of cross-eye "is almost universal."

"Children with minimal cerebral injuries are often explosive or obsessive," she continued. "They tend to have poor emotional control with exaggerated tantrums; they sometimes have bizarre fears."

During the first year of life, she said, lack of muscular coordination is most pronounced, "which tends to evoke erroneous diagnoses of gross mental defect." During the second and third years, however, these motor defects become less pronounced.

"Independent walking may be delayed to beyond 20 months and tends at first to be a little stiff, awkward and propulsive. Manual skills are very variably developed; the same child may be quite skillful and adept with his fingers, but unable to feed himself because of inadequacies in the complicated coordinations required for this particular skill.

"Speech defects due to poor labial, lingual and pharyngeal coordinations are common and drooling may persist well into the third or fourth year."

She said that while muscular defects usually become almost unrecognizable by the time the child is five or six years old, "really good coordination is rarely achieved."

"This is not the material from which good athletes are developed nor does the injured child ever become really expert in such special skills as piano playing, typing, or sewing."

That the incidence of minimal brain injury is more widespread than is commonly supposed is shown, she added, by a survey of 100 supposedly normal infants in which six children were found "with evidences of minimal injury."

"Recognition of the underlying organic basis for the behavior abnormalities will bring about wiser and more understanding management of the so-called behavior problems," she concluded.

"Certainly they should not be considered disciplinary problems; they should be regarded as evidences of faulty coordinations in personality development. Under sympathetic guidance and management the tendency in the personality field, as the motor field, is toward resolution and amelioration."

## VETERANS' NEWS

Veterans Administration is training more psychiatrists than all the schools in the country.

About two out of every three men between the ages of 20 and 35 are World War II veterans.

One out of every 10 persons in the United States is a veteran of World War II.

## WRITER GIVES TIPS ON CHOOSING DOCTOR

Persons who want to choose a competent doctor should judge physicians by their training and the organizations to which they belong, not by the appearance of their offices or their advertising of spectacular cures, advises Audrey McKeever of the Bureau of Health Education of the American Medical Association.

Writing in the current issue of *Hygeia*, the health magazine of the American Medical Association, Miss McKeever points out that strangers in a city may obtain information about doctors' training, hospital and teaching connections, and membership in special medical societies from the Directory of the American Medical Association. This directory can be found in most public libraries and hospital offices.

To verify the ethics of a physician, contact the local county or city medical society, which will either be listed in the telephone directory or registered with the health department or the city hall, she says.

The best method to choose a specialist is to ask your regular physician to recommend one, as he has the advantage of knowing who the good specialists are, she advises. Another method is to consult the Directory of Medical Specialists in a public library.

A listing of membership in the American College of Physicians, the American College of Surgeons, or of certification by one of the 16 American specialty boards is a good recommendation, according to the article. Miss McKeever points out, however, that many excellent specialists have not taken the examinations of the specialty boards and not being listed as a diplomate does not indicate lack of professional ability.

Miss McKeever gives these tips on how not to choose a doctor:

"1. By the way his office looks. Many excellent doctors have little interest in interior decorating.

"2. By the number of times he gives prescriptions. Not all diseases benefit from drugs or pills. To expect a doctor to write a prescription every time is to ask him to become a pill dispenser instead of a physician.

"3. By how quickly he decides what the trouble is. A patient should encourage a doctor's carefulness, not question it.

"4. By the doctor's age. Good doctors come both young and old, one bringing the advantage of his recent schooling and the other his experience.

"5. By the extravagant claims he makes about his ability. Reputable doctors of medicine do not advertise spectacular cures. A cure discovered by a good member of the medical profession is not hoarded for his personal exploitation and profit, but made known to the whole profession in medical journals and at medical meetings."

## SCIENTIST DESCRIBES NEW TYPE X-RAY FLUOROSCOPE

A new type amplifier which will increase the brightness of fluoroscopic x-ray images by 500 times has been described by John W. Coltman of the Westinghouse Research Laboratories, East Pittsburgh, Pa.

He read a paper Sept. 15, 1948, entitled "Fluoroscopic Image Amplification" before 1,000 physicians who specialize in x-rays. The doctors were attending the 48th annual meeting of the American Roentgen Ray Society in Chicago.

Mr. Coltman's paper was based on the intensive research which was done on the new fluoroscopic x-ray image amplifier, which is now being constructed at the Westinghouse Research Laboratories. When perfected, the device will take the form of an attachment for standard fluoroscopic equipment now in use in hospitals and doctors' offices throughout the country.

"There are two reasons why image amplification is necessary if large increases of brightness are to be obtained," Mr. Coltman said. "First, x-ray intensities are always at the patient's tolerance level, and may not be further increased without danger of injury. Second, there is not sufficient energy in the emerging x-rays to form an adequately bright picture even if all the energy were converted into light."

X-rays at the present time provide two different methods of examination. One is known as radiography, whereby a permanent record of the x-ray image of various parts of the body is made on film. The other method is known as fluoroscopy, which affords a means of visual study of the x-ray shadow on a fluorescent screen.

X-ray examination by fluoroscopy makes it possible to study internal organs in motion. The fluoroscopic viewing screen consists of a cardboard treated with chemicals which fluoresce—or give off visible light—when exposed to the action of the x-rays. When x-rays strike such a screen, either directly or after passing through some part of the body, an image in visible light is produced on the screen.

"Unfortunately, however, the fluoroscopic image is excessively dim," Mr. Coltman said, "and at existing brightness levels the human eye is capable of perceiving only a fraction of the detail which is actually on the screen."

The vital need for greatly brightened fluoroscopic images was first described by Dr. W. Edward Chamberlain, professor of radiology, Temple University, Philadelphia, as far back as 1941. In a lecture that year he showed that the human eye is incapable of distinguishing all but gross evidence that is actually present on a fluoroscopic screen because of the low illumination level of the screen.

The new image amplifier increases the brightness of the fluoroscopic image after the x-rays have passed through the patient. With the imagine amplifier tube attached to his equipment the physician will step into his dark room and see at once an image in appearance almost as bright as a movie screen. He may still have to dark-adapt his eyes, though for only three or four minutes, before he can see all the details. What he sees after that will be a clear, easily discernible feature presentation of his patient's organs at work.

With this new amplifier the physician will be able to perceive objects which at present are indiscernible.

Image amplifications has been achieved by converting the x-ray pattern into an electron stream, and accelerating these electrons to high velocities. In this way, energy from an external source is introduced into the system, and when the electrons impinge on a phosphor layer, brighter image results.

"With the advent of image amplification, many changes and improvements of fluoroscopic technic will be possible," Mr. Coltman said, adding: "As one of the most striking changes undoubtedly to come, we may anticipate a marked reduction in the time of examination. The increased brightness will permit acquisition of the desired information by the doctor in a relatively short time. The long observations now necessary to make sure of the absence of certain diagnostic evidence will be in many cases cut short by the immediate appearance of that evidence."

## DO YOU KNOW?

By 1952, veterans and their families will number an estimated 62,300,000—or 43 per cent of the nation's population.

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Health is something that all men desire and there is no limited supply for which nations must compete. Public health work carries no threat to anybody, anywhere. Cancer and scarlet fever has no political ideology. Raymond B. Fosdick, Am. J. Pub. Health, Jan., 1948.

Although tuberculosis is extremely serious in infancy, the disease is relatively mild later in childhood. It is also true that the treatment of children with a primary complex, such as that afforded by a sanatorium, has no effect on the development of progressive tuberculosis in later life. Joseph D. Wassersug, M.D., New England J. Med., July 13, 1947.

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A rehabilitation program in a sanatorium is a plan of treatment to counteract the psychosomatic effects of the disease, tuberculosis. In such a program physical retraining, mental and social readjustment are essential and, as an adjuvant to these, vocational training is valuable. A. N. Aitken, M.D., Am. Rev. Tuberc., Jan., 1947.

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Only seven states—Colorado, Connecticut, Massachusetts, Michigan, North Dakota, Rhode Island and Wisconsin—have two and a half or more beds available for the tuberculosis per annual death from tuberculosis. Mary Dempsey, NTA.

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The diagnosis of pulmonary tuberculosis is simple and uncomplicated only if adequate positive data are readily obtained. The patient with obviously extensive chest film findings and sputum positive for tubercle bacilli presents no diagnostic problem. At that stage, with probable far advanced disease, he presents no therapeutic problem—the pulmonary disease is far advanced—the prognosis guarded. Rubin H. Kaplan, M.D., and Louis Levin, M.D., J. Missouri M. A., Jan., 1948.

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The tubercle bacillus seems to select its tissue and confine its ravages there. Patients with lupus vulgaris rarely have active glandular, osseous and pulmonary tuberculosis in addition to cutaneous lesions. Patients with mixed tuberculosis are rare. The number of cases of pulmonary tuberculosis in which lesions of skin, bone or gland developed was comparatively small. Henry E. Michelson, M D., J.A.M.A., April 17, 1948.

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The tasks of health education are not merely to teach the facts of the modern science of hygiene but ultimately to persuade men to apply these facts. Motivation in Health Education. Iago Galdston, M.D., Columbia Univ. Press, 1948.

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It has been recognized for many years that the prevalence of tuberculosis among mentally ill patients is exceedingly high. A. H. Russakoff, M.D., Am. Rev. Tuberc., Jan., 1947.

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There is no Marxian method of eliminating gambiae mosquitoes as distinguished from a western democratic method. The principles of sanitary engineering do not bear a Russian or an American label. No difference exists between tuberculosis in the Soviet Union and tuberculosis in the United States. Infantile paralysis is the same thing in Moscow and in Washington, and human sorrow is no less poignant in one city than in the other. The world of disease and misery is not divided; it is a common world. In terms of human suffering the world is truly and tragically one world. Raymond B. Fosdick, Rockefeller Foundation Rev., 1947.

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Vaccination with BCG does not provide complete protection against tuberculosis and, until further controlled studies are conducted, cannot be recommended for the general population. However, since it appears to provide some degree of protection, its use is recommended for members of groups constantly exposed to tuberculosis if they have a negative reaction to the tuberculin test. ATS Chemotherapy Comm., NTA, Nat. Tuberc. A. Bull., March 1948.

The unsolved problem of hospitalization of the tuberculous in this country poses many questions. In recent years over one-third of all deaths from pulmonary tuberculosis occurred outside of hospitals and institutions. Herman E. Hilleboe, M.D., Journal-Lancet, June, 1947.

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The serious potentialities of minimal incipient lesions of the pulmonary tuberculosis indicate the need for both careful therapeutic management and extended follow-up observation of such cases. David Reisner, M.D., Am. Rev. Tuberc., March, 1948.

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Tuberculosis is one of the great enemies of mankind. During the war, deaths from this disease increased almost everywhere as a result of crowding, malnutrition, and the intimate association of open cases of the disease with the general population due to the breakdown of control measures. Indeed, during 1944 and 1945, the death rates in Europe reached most alarming heights, in many places doubling the prewar rate. Since that time there has been a deceptive reduction in current tuberculosis death rates, due to the fact that many of those persons who would normally have survived to swell the present death rate died earlier than would have been their expected lot. The rate of infection, however, remains high, as revealed by mass x-ray and tuberculin surveys, threatening a progressive increase in death rates during ensuing years. Important steps can be taken to ward off this increase and reduce, progressively, the rate of infection. Long-established methods of control, which have proved highly effective where they have been well developed, require extension and strengthening. The essence of these control measures is the finding and isolation of contagious cases. H. van Zile Hyde, M.D., World Health Organization, Progress and Plans, Dept. of State Bull., April 4, 1948.

## SECOND ANNUAL INTERIM SESSION TO EMPHASIZE GENERAL PRACTICE

Attention of the medical profession will be focused on procedures and problems of the family doctor, or general practitioner, at the second annual Interim Session of the American Medical Association in St. Louis, November 30 to December 3, 1948.

On the eve of the Interim Session, Saturday, November 27, the first national Medical Public Relations Conference will be held under sponsorship of the A. M. A. at the Statler Hotel in St. Louis.

Lecture meetings and a wide variety of clinical conferences on conditions most often seen in daily practice will be conducted at the Interim Session by medical leaders from all sections of the nation.

Subjects to be discussed include diabetes, heart disease, cancer, poliomyelitis, obstetrics, pediatrics, dermatology, genito-urinary conditions, hypertension, anesthesia, tuberulosis, jaundice, laboratory diagnosis, x-ray diagnosis, and physical medicine as applied to the treatment of arthritis.

Diagnosis and treatment will be stressed in the clinical conferences, which will be correlated with the lecture meetings.

Evening programs will feature distinguished speakers and the award of the general practitioner medal.

A scientific exhibit with nearly 100 displays will show clinical and pathological material, and approximately 115 leading manufacturers will display technical exhibits of new medical products, equipment, and publications. All exhibits will be open from Tuesday at 8:30 a.m. to Friday noon, November 30 to December 3.

Papers will be read at the General Scientific Meetings in the St. Louis Opera House from 9 to 10 a.m. and from 2 to 3 p.m. each day.

## VA DISCUSSES MALARIA

Thousands of veterans who contracted malaria overseas during World War II have been cured, Veterans Administration said recently.

Within the next few years, the problem of relapse from war-acquired malaria will be an insignificant one, VA added.

The rate of cures is indicated by VA statistics. During June, 1947, approximately 130,000 veterans were receiving compensation for malaria incurred in service. Nine months later, in March, 1948, this number had dropped to 32,000. It is still declining.

The number of relapses also has declined—from approximately 500,000 cases infected during the war to less than 10,000 at present.

The parasite eventually "burns itself out" in human bodies in from one to three years, although some cases are known to have remained infected for as long as 20 years.

Use of the drugs chloroquine, pamaquine (plasmochin), and the more recently synthesized 8-amino quinolines, such as pentaquine and isopentaquine, have given splendid results, VA said.

VA recognizes the necessity for thorough diagnosis of ailing veterans, especially those who served in tropical areas.

VA said it is greatly concerned about the need for increased educational facilities in the field of tropical medicine and is exerting every effort to provide greater opportunities for the training of physicians and laboratory technicians.

## ARRANGEMENTS MADE FOR 1949 ASSEMBLY OF GENERAL PRACTITIONERS

Twelve hundred rooms have been reserved in Cincinnati's leading hotels to accommodate members and guests attending the 1949 Scientific Assembly of the American Academy of General Practice, March 7, 8, and 9. This number may be increased to fifteen hundred later if advance reservations indicate the need for additional rooms.

A printed form for requesting hotel accommodations will be sent to all members later. All requests for reservations must be addressed to the Chairman, Sub-Committee on Hotels, American Academy of General Practice, Dixie Terminal Building, Cincinnati 2, Ohio.

Dr. Joseph Lindner, Cincinnati, is chairman of the Committee on Local Arrangements. Serving with him are Doctors D. G. Miller, Jr., Morgantown, Kentucky; Lester D. Bibler, Indianapolis; and John O. Boyd, Jr., Roanoke, Virginia. The chairmen of the Sub-Committee on Hotels and the Sub-Committee on Registration are yet to be appointed.

The state chapters of the Academy in Ohio, Indiana, and Kentucky, are acting as co-hosts for the meeting. Entertainment will be provided for the wives of members by the Ladies' Entertainment Committee, of which Mrs. Paul A. Davis is chairman.

Doctors Paul A. Davis, E. C. Texter, R. C. McElvain, J. P. Sanders, and F. G. Benn, compose the Scientific Program Committee. The list of speakers they are selecting and the program they are developing promises to be of outstanding value and interest to general practitioners. Several excellent meetings for general practitioners are presented each year by other organizations, but this will be the only scientific meeting for general practitioners prepared and presented by their own organization.

All scientific sessions will be held in the spacious Hall of Mirrors of the Netherland Plaza, one of America's most beautiful hotels. The sessions will recess for a short period each morning and afternoon to permit members to visit the technical exhibits. The country's leading pharmaceutical manufacturers, publishers, equipment and appliance companies, and special food distributors, will be represented in the technical exhibit.

Dr. E. Clarkson Long, Detroit, is chairman of the Technical Exhibit Committee. Dr. Henry Lehrer, Sandusky, Ohio, and Dr. Emil R. Sweptson, Cincinnati, are the other members of the committee.

## NEWS ITEMS

Dr. Robert A. Atkins, Royston, announces the opening of his office at Royston for the practice of medicine. He will also be associated with Dr. Stewart D. Brown of Brown's Hospital, Royston. Dr. Atkins graduated from the University of Illinois College of Medicine, Chicago, and interned at the Cook County Hospital, Chicago. He then served two years in the U. S. Army Medical Corps, being stationed at Oliver General Hospital, Augusta, where he specialized in dermatology.

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Dr. Jack E. Bell, Augusta physician, was recently guest speaker at the Augusta Optimist Club. Scoring what he termed "Poliophobia", he urged the members of the Optimist Club to take a realistic attitude towards today's prevalence of the disease. "In approximately one out of every two cases of polio today," he said, "no paralysis is evidenced, and 25 per cent of the cases have complete recovery." He compared the 15 per cent death rate from polio with a 10 to 25 per cent from whooping cough and 12 per cent from diphtheria. Dr. Bell likened the current "Poliophobia" to the tuberculosis-phobia of many years ago.

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Dr. Walter H. Cargill, Atlanta, announces the opening of offices for the practice of internal medicine, Suite 343 Doctors Building, 490 Peachtree Street, N. E., Atlanta. Special attention to hypertension and renal diseases.

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Captain William M. Cason, formerly of Sandersville, senior medical officer at the Atlanta Naval Air Station since January 1946, has been released from inactive duty and will practice medicine in Atlanta. Before the war he practiced in his home town of Sandersville. Entering service in May, 1916, Captain Cason served four years as an enlisted man and then left the service to study medicine at Temple University School of Medicine and Jefferson Medical College, both of Philadelphia. He now has 13 years of active duty, 32 years of active and inactive service combined. Captain Cason was graduated from the School of Aviation Medicine, Pensacola, Fla., in July 1942, and has been a flight surgeon since that date.

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Dr. James M. Combs, Atlanta, announces his association with Drs. L. N. Turk, Jr. and P. L. Collinsworth in the Candler Building, and 1173½ Lee Street, S. W., Atlanta. Practice limited to industrial and general surgery.

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Dr. Martin M. Cummings, Atlanta, director of the U. S. Public Health Service Tuberculosis Evaluation Laboratory at Lawson Veterans Administration Hospital, Chamblee, presented a paper before the International Union Against Tuberculosis held in Paris, France, September 22. Strides made in this country toward the more efficient diagnosis of tuberculosis was described by the Georgia doctor to physicians and health workers from all over the world. The only American doctor to attend the scientific session, Dr. Cummings represented the National Tuberculosis Association. After the Paris meeting he expects to spend several weeks in Denmark, where the death rate from tuberculosis is the lowest in the world, studying control methods. The U. S. Public Health Service is no longer satisfied with just x-ray examinations, but follows through with sputum tests where scars or shadows indicate a possibility of tuberculosis.

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Dr. Roy L. Denney, Carrollton physician, recently

went to Longview, Texas, where he will work and study in the hospital of Dr. E. V. Hurst. Dr. Denney will spend a year studying eye, ear, nose and throat diseases. Dr. Denney will return to Carrollton when he has completed his study.

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The Fifth District Medical Society officers announce the fall meeting to be held at the Academy of Medicine, Atlanta, November 11. Dr. W. Bryan Rawls, a former Georgian, now president of the New York Academy of Medicine, New York, will speak on "The Social and Economic Problems Confronting the Medical Profession." Dr. Melvin H. Knisely, recently appointed professor of anatomy at the Medical College of the State of South Carolina, Charleston, will speak on the subject that has made him famous, "Blood Sludge." This is an important meeting because it will be necessary for the Fifth District to elect its representative to the State Board of Health to take the place of Mr. Robert F. Maddox, who recently resigned. The society will also elect new officers. The ladies of the Auxiliary have promised another delightful dinner for those who pay in advance. Dr. L. Minor Blackford, Atlanta, secretary.

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The Fulton County Medical Society held its semi-monthly dinner meeting at the Academy of Medicine, Atlanta, September 2. Scientific program: Dr. T. F. Sellers presiding. "Tuberculosis Problems in Georgia", Dr. H. C. Schenck; "Problems in Maternal and Child Health", Dr. Guy V. Rice; "Georgia Cancer Control Program", Dr. W. J. Murphy, and "VD Control Program", Dr. C. Dan Bowdoin.

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The Georgia Baptist Hospital medical staff held its monthly dinner meeting in the Nurses' Home dining room, September 21. An unusual case of congential duodenal partial obstruction in a young man 17 years of age was discussed. Dr. Wm. G. Hamm, secretary.

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Georgia physicians who participated on the State Vocational Rehabilitation program recently held at the General Oglethorpe Hotel, Savannah, were Drs. T. P. Goodwyn, C. C. Aven, W. G. Hamm, Jeff Richardson, Edgar H. Greene, H. C. Crawford, Homer C. Swanson, Charles Rushin, and Ben H. Clifton, all of Atlanta; Drs. Harry Harper, Jr., and Frank Jones, both of Augusta; Dr. O. F. Keen, Macon; Dr. W. E. Mayher, Columbus, and Drs. B. H. Minchew and Braswell E. Collins, both of Waycross.

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A Georgia chapter of the American Academy of General Practice was organized at the Hotel Dempsey, Macon, September 12. Dr. Steve P. Kenyon, Dawson, was named president of the new chapter; Dr. J. B. Kay, Byron, vice-president, and Dr. Albert R. Bush, Hawkinsville, secretary-treasurer. Directors are Dr. W. G. Elliott, Cuthbert; Dr. Fred Simonton, Chickamauga; Dr. Harry L. Cheves, Union Point, and Dr. George H. Alexander, Forsyth. Purpose of the organization is to raise the standards of general practitioners throughout Georgia and the nation. Organized nationally in 1947 at the convention of the American Medical Association, the academy requires that each member complete 150 hours of post-graduate work for each three years of his membership. This, officials explained, is in an effort to make sure all doctors doing general practice keep up on latest developments in the medical world. To be eligible for membership, a doctor must be a member of the American Medical Association, must be engaged in general practice, must be licensed in the state in which he practices and must be of high moral and professional character. In addition, the physician must have had at least one year of rotating internship at an approved hospital or the equivalent in post-graduate work. He must have been in general practice at least three years and must have shown an interest in continuing his medical advancement by engaging in post-graduate educational activities. Officials said that unless a member of the Academy completes 150 hours of post-graduate work for each three years of his membership, his certificate as a member of the Academy may be revoked. The 1949 meeting of the Georgia chapter will be held in Savannah, Dr. Kenyon said. General practitioners present at the first meeting of the Georgia chapter were: Drs. R. C. Montgomery, Butler; William G. Simmons, Sylvania; D. C. Kelley, Lawrenceville; H. Homer Allen, Decatur; Edwin W. Turner, East Point; F. N. Gibson, Thomson; Sam A. Anderson, Milledgeville; Leon Lapides, Columbus; John E. Smith, Fitzgerald; P. L. Williams, Cordele; J. L. Gallemore, Perry; F. M. Houser, Macon; John A. Bell, Jr., Dublin; and Frank Vinson, Fort Valley.

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The Georgia Cerebral Palsy Society met recently at Elks Hall, Atlanta. Dr. Harriet Gillette, Atlanta, medical director of the Crippled Children's League of Georgia, was guest speaker; her talk was on "Types of Cerebral Palsy." A movie, "And Now to Live," which was sponsored by the National Society for Crippled Children and Adults and deals with cerebral palsy, was shown at the meeting.

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Dr. Harvey Howell, Cartersville, announces his association with his father, Dr. S. M. Howell, Howell-Quillian Clinic, Cartersville, for the practice of medicine. Dr. Howell graduated from Emory University School of Medicine, Atlanta, and recently completed his internship at Ohio State University College of Medicine, Columbus, Ohio.

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Dr. Calvin Jackson, Manchester, released recently from active duty with the Army Air Corps medical department after two years' service, is now associated with Dr. W. P. Kirkland, Manchester, in the practice of medicine. He graduated from the University of Georgia School of Medicine, Augusta, and interned at Piedmont Hospital, Atlanta.

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Dr. R. C. Jordan, formerly of Bartow, recently released from the U. S. Army Medical Corps, having served as captain, announces the opening of his offices in the Middlebrooks Building, Barnesville, for the practice of medicine.

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Dr. E. H. Kalmon, Jr., Albany, has accepted an appointment of the Hospital Authority to the position of director of the Department of Radiology at Phoebe Putnam Hospital, Albany. Dr. Kalmon graduated from Vanderbilt University School of Medicine, Nashville, Tenn., in 1940. He interned in surgery at Vanderbilt University Hospital, Nashville. He entered the Army Air Force in 1941 and remained in service until 1946. He returned to Vanderbilt University Hospital where he studied and worked in the x-ray department during 1946 and 1947.

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Dr. A. H. Letton, Atlanta, was guest speaker at the Cobb County Medical Society meeting held in Marietta, September 7. His subject was "Cancer of the Stomach." He also showed the motion picture "Curare in Barbiturate-Oxygen Anesthesia."

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The Lowance Clinic, Suite 215 Doctors Building, 478 Peachtree Street, N. E., Atlanta, announces the association of Dr. Franklin H. Goodwin, recently of the Cleveland Clinic, Cleveland, Ohio. Internal medicine, allergy, cardiology, pathology and radiology. Drs. Mason I. Lowance, Eugenia C. Jones, Warren B. Matthews, Edgar W. Dunstan, Otho M. Simms, Franklin H. Goodwin, George Bachmann consultant in cardi-

ology, and William W. Bryan consultant in radiology.

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Dr. D. L. Nix, Lakeland, announces his acceptance of a position with the Florida State Government at Rayford, Florida, where he will be in charge of the State Hospital and his assignment will also cover the entire penal system of the state. The people of Lakeland hope they will soon have another physician to take the place of Dr. Nix.

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Dr. Jack C. Norris, Atlanta pathologist, has been named chairman of the Cancer Commission of the Medical Association of Georgia, succeeding the late Dr. J. L. Campbell. The commission co-ordinates the cancer control program of the State Medical Association, the American Cancer Society, and the Cancer Control Division of the Georgia Department of Public Health.

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Dr. Rivington H. Randolph, a native of Winder, announces the opening of his office for the practice of general surgery, 130 West Hancock Avenue, Athens. Dr. Randolph graduated from Harvard Medical School, Boston, in 1940; interned at Boston City Hospital 1940-42; U. S. Navy Medical Corps Pacific theater during World War II 1942-46, and served as senior resident surgeon at Lawson Veterans Administration Hospital, Chamblee, 1946-48.

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Dr. C. A. N. Rankine, a native of Griffin, announces the opening of his office for the practice of medicine at 3997 Peachtree Road, Brooklhaven. Dr. Rankine graduated from New York University, University and Bellevue Hospital Medical College, New York City.

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Dr. T. W. Rentz, Camilla, announces he will be in his office at Newton, the Baker County seat, each Monday, Wednesday and Friday afternoons. Since the death of Dr. C. W. Twitty several weeks ago, Baker County has been without a physician.

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Dr. George S. Roach, Jr., Atlanta, of the staff of the Ponce de Leon Infirmary, Atlanta, is attending Dr. Gabriel Tucker's course in Bronchology, Esophagology and Laryngosurgery at the University of Pennsylvania School of Medicine, Philadelphia.

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Dr. F. H. Sams, Reynolds physician and surgeon, was recently appointed surgeon of the Central of Georgia Railway by officials of the company at Savannah, and Dr. S. H. Bryan, of Reynolds, has been promoted from the same position to the position of consulting company surgeon.

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Dr. J. Elliott Scarborough, Atlanta, will participate on the program of the American College of Surgeons in Los Angeles, Oct. 18-22. He will speak on "Five-Year Cures in Emory University Hospital" in a cancer symposium and will also appear in a panel discussion on "Tumors of the Mouth, Jaw and Face." Dr. Charles P. Marvin, Atlanta, will report on his research in "Intraduodenal Spread of Malignant Gastric Lesions" and at a "Forum on Fundamental Surgical Problems."

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Dr. W. J. Schneider, of Folkston, announces the removal of his offices to Jacobs Place at Homeland. His new office is equipped with a first class x-ray machine which will help him to take better care of his patients.

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Dr. W. G. Simpson, Tate, will be in charge of the Tate Clinic, which the residents of Tate built at a cost of $35,000. The clinic is built of marble brick and is designed primarily for general medical practice, and has seven beds. Dr. Simpson will serve as general practitioner for Tate and the surrounding communities.

Dr. J. E. Smith, Fitzgerald physician, recently was guest speaker for the Fitzgerald Rotary Club. Dr. Smith discussed the needs of the malaria control program in Fitzgerald and Ben Hill County.

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The Southeastern Society of Neurology and Psychiatry held its September meeting at the Echetah Country Club, Milledgeville. Drs. Edwin W. and H. Dawson Allen were hosts for the meeting. The session assembled 60 physicians and clinical psychologists from the Southeastern states. Dr. C. C. Odom of the Veterans' Hospital, Augusta, founder and president, presided. During the business session resolutions were passed appointing a committee to act for the society on the matter of amalgamation with the Atlanta Society of Neurology and Psychiatry. The program included two scentific papers. Dr. Shannon Mays, Macon, read a paper on "Psychogenic Factors in Bronchial Asthma", and Dr. Veonica M. Pennington, of the Milledgeville State Hospital staff, read a paper on "Modern Treatment of Paresis." A paper on "Comparasion of Penicillin and Penicillin-Malaria Therapies in the Treatment of Syphilis of the Central Nervous System" was read by Dr. Love Ellery.

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The Upson County Medical Society held its monthly meeting at the Hotel Upson, Thomaston, Septemher 7, with ten members and two visitors present. The visitors were Dr. Amey Chappell, Atlanta, and Dr. D. L. Head, Zebulon. After dinner Dr. R. E. Dallas, president, presided over a brief business session at which time Dr. R. L. Carter presented the revised hospital plans. Dr. Ivylyn Girardeau, program chairman for the meeting introduced Dr. Chappell, the speaker of the evening, who read an interesting paper on "The Treatment of Sterility." An informal discussion followed. Dr. Ivylyn Girardeau, secretary-treasurer.

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The Walton County Medical Society recently announced that the Monroe doctors have agreed to alternate their work on Sundays, with the respective doctors opening his office on Sunday mornings. The new arrangements benefits both the public and the doctors, as the patients are encouraged to go to the doctor's office rather than to his residence. The physicians of Monroe feel sure that the general public appreciates this new arrangement, which assures them competent, immediate medical care for all the days in the week.

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Dr. Hoke Wammock, formerly of Philadelphia, has reported to the University of Georgia School of Medicine, Augusta, to assume charge of the new cancer teaching program under the grant from the National Institute of Health, Dr. G. Lombard Kelly, dean, University of Georgia School of Medicine, announced recently. Dr. Wammock comes to Georgia from Philadelphia, where he was on the staff of the Post-graduate School of Medicine of the University of Pennsylvania. He served his residency in surgery at the Jeanes Hospital, Philadelphia, and later was chief of staff of that institution. Dr. Wammock was born in Soperton. He graduated from the University of Georgia School of Medicine, Augusta, in 1928. He is certified by the American Board of Surgery. For many years he has been engaged in the practice of tumor surgery.

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Dr. Alfred Weinstein, Atlanta physician and author of "Barbed Wire Surgeons", spoke recently to the Cobb County Business and Professional Women's Club at the Y.W.C.A., Marietta.

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Dr. Paul L. Schroeder, Atlanta psychiatrist, was one of the speakers at the Health Education Conference for Teachers which was held at Rome, August 25-26. Dr. Schroeder has won international recognition as director of the Institute for Juvenile Research in Chicago, and as professor of psychiatry at the Univer-

sity of Illinois College of Medicine, Chicago.

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The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, September 16. Scientific program: Symposium—Pulmonary Tuberculosis, Dr. Rufus Payne, Rome, presiding. "Differential Diagnosis in Tuberculosis", Dr. Fred Whelchel, Rome; "Temporary Collapse Therapy in Treatment", Dr. H. E. Crow, Rome; "Streptomycin in Treatment", Dr. John Crenshaw, Rome, and "Surgical Treatment", Dr. Fred Crenshaw, Rome.

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The Seventh District Medical Society held its meeting at the American Legion Memorial Home, Cartersville, September 29. Program: Invocation, Dr. Albert K. Mathews, Rector, Ascension Episcopal Church, Cartersville; Address of Welcome, Dr. S. M. Howell, Cartersville; Reading of minutes; report of committees, and report of councilor, Dr. W. H. Perkinson, Marietta. Scientific papers: "Fracture of the Hip", Dr. Lee H. Battle, Jr., Rome; discussion led by Dr. J. H. Mull, Rome; "Mild Manic-Depressive Psychosis, Depressive Type, Clinical and Psychiatric Significance", Dr. John D. Campbell, Atlanta; discussion led by Dr. Warren Gilbert, Rome, and Dr. Martin Van Buren Teem, Marietta; "Toxemia of Pregnancy", Dr. R. A. Bartholomew, Atlanta; discussion by Dr. Robert Norton and Dr. Raiden Dellinger, both of Rome; "Emergencies Encountered During the Newborn Period", Dr. M. Hines Roberts, Atlanta; discussion by Dr. R. W. Fowler, Marietta, and Dr. Sam Garner, Rome. Officers are Dr. Inman Smith, Rome, president; Dr. Sam M. Howell, Cartersville, president-elect; Dr. Lee H. Battle, Jr., Rome, secretary-treasurer, and Dr. W. H. Perkinson, Marietta, councilor.

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The Woman's Auxiliary to the Seventh District Medical Society met at the Cherokee Club Room, Mary Munford Memorial Library, Cartersville, September 29. Program: Welcome, Mrs. Willliam Quillian, Cartersville; Response, Mrs. Emmett Brannon, Rome; Reading of minutes, reports from county auxiliaries, and new business. "Some Fallacies of Psychiatry", Dr. John D. Campbell, Atlanta. Mrs. John M. McGehee, Cedartown, district manager, and Mrs. Frank A. Blalock, Rome, secretary.

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The Ninth District Medical Society held its fall meeting at the Wheeler Hotel, Gainesville, September 15. Invocation, Rev. D. T. Buice, pastor, Emanuel Baptist Church, Gainesville; minutes of the last meeting; "Headache", Dr. C. W. Whitworth, Gainesville; "Arrhenoblastomia, With Rupture and Hemorrhage", Dr. Charles Henry, Toccoa; discussion by Dr. D. F. Mullins, Jr., Athens; Management of Congestive Heart Failure", Dr. Herbert E. Valentine, Jr., Gainesville; "Some of Our Objectives in 1948-1949", Dr. Edgar H. Greene, Atlanta, president, Medical Association of Georgia. Officers are Dr. Wm. H. Good, Jr., Toccoa, president; Dr. J. L. Walker, Clarkesville, vice-president, and Dr. Hartwell Joiner, Gainesville, secretary-treasurer.

The Woman's Auxiliary of the Ninth District Medical Society met at the Wheeler Hotel, Gainesville, September 15.

## NEW BOOKS

*Essentials of Pathology*, by Lawrence W. Smith, M.D., former Professor Pathology, Temple University School of Medicine, and Edwin S. Gault, M.D., Associate Professor of Pathology and Bacteriology, Temple University School of Medicine. 3rd Edition, 764 pages including 740 illustrations, many in color, and 261 case histories.

Because of the almost unbelievable advances in the field of medicine during the past quarter of a century the authors, in presenting the modern status of pathology, have followed the policy of adhering strictly to essentials. This has been done by the abundant use of illustrations, including many handsome full-color drawings, and by grouping of material in concise, descriptive paragraphs which can be immediately located and utilized by the teacher, the student and the pathologist.

The clinical history and pathologic findings for each case are excellent aids in vitalizing the study and correlating the new facts learned by actual observation. Figure numbers and references are carefully integrated with pertinent material. 261 case histories are presented in detail; bibliographies are classified. A new, more convenient format has been adopted. The Blakiston Company, Philadelphia and Toronto, 1948. Price $12.00.

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*The Liver and Its Diseases*, by H. P. Himsworth, M. D., Professor of Medicine in the University of London; Director of the Medical Unit, University College Hospital, London. 1st Edition, 204 pages, 58 illustrations.

During the last few years researches into the problems of hepatic disease have been advancing, though unobstrusively, at an increasing pace, and many conceptions regarding its pathology, therapy and prevention, and the significance of its clinical features are in need of revision. Hitherto the new work in this field has been scattered through numerous specialized journals. Now, however, Professor Himsworth has collected these isolated contributions, correlated them, gained a view of the field as a whole, and formed an estimate of its possibilities. This volume should receive an enthusiastic welcome not only from physicians and pathologists but also from physiologists and biochemists. Those concerned with nutritional problems will find it of particular interest.

This authoritative contribution to and discussion of current knowledge constitutes a reference work on diseases of the liver that should be of interest to nearly every practicing physician as well as to men engaged in research in this field. Harvard University Press, Cambridge, Massachusetts, 1947. Price $5.00.

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*A-B-C's of Sulfonamide and Antibiotic Therapy*, by Perrin H. Long, M.D., Professor of Preventive Medicine, Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital. 231 pages. Philadelphia and London: W. B. Saunders Company. 1948. Price $3.50.

Here is the new working manual—written exactly the way you want it, with not a word wasted. It gives precise, matter-of-fact guidance on the use and effect of the sulfonamides, penicillin and streptomycin.

156 diseases and conditions are covered (in alphabetical order for easy reference). Dr. Long tells you just how to administer the drug of choice and how to watch for complications and toxicity. And he tells you just as frankly, under many diseases, that it is useless or perhaps harmful to attempt therapy of this sort. You will find six separate and detailed dosage schedules for the sulfonamides and antibiotics. There are eight full pages of vitally important "Hints on the Use of Sulfonamides and Antibiotics."

This book will fit in your pocket, your bag, or your desk drawer—but it will never stay there long. You will use it constantly and confidently every day in your practice.

* * *

*Human Biochemistry*, by Israel S. Kleiner, Ph.D., Professor of Biochemistry and Physiology, New York Medical College, Flower and Fifth Avenue Hospitals; formerly Associate, The Rockefeller Institute for Medical Research, New York. 640 pages, 70 text illustrations and five color plates. The C. V. Mosby Co., 3207 Washington Blvd., St. Louis. Price $7.00.

With his first edition a few years ago, Dr. Kleiner presented the basic principles of biochemistry empha-

sizing the subject in its relation to clinical problems. As such it proved to be a most successful text and has a warm reception from students and practitioners in medicine.

This revision includes the addition of numerous significant discoveries in research written so clearly as to be of real reference value for the biochemically-minded" physician.

New chapters on: Chemical Structure in Relation to Biological Phenomena. This includes a consideration of "Detoxication" and "Biochemical Antagonism."

Newer ideas on the chemistry of starch and glycogen, blood-clotting, fat digestion and fat absorption.

New sections have been added on Ferritin, microbiological assays, biochemistry of inflammation, mycolytic enzymes, pyrogens.

Expansion of the chapter on vitamins; the section on electrophoresis, dental caries, antibiotics and the biochemistry of cancer. Also, the chapters on hormones, nitrogen metabolism, carbohydrate metabolism, lipid metabolism.

The chapter on physiological oxidations has been rewritten and clarified.

* * *

*Neuroanatomy*, by Fred A. Mettler, A.M., M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York, 2nd Edition, 535 pages, 357 illustrations, 33 in color. The C. V. Mosby Co., 3207 Washington Blvd., St. Louis. Price $10.00.

In accordance with new developments in the field of Neuroanatomy, the second edition of this text has been completely revised and expanded.

The illustrative matter and the presentation of the subject make it a book to be cherished—an inspiration and a revelation to the student of neurology.

The material is covered in two parts: Part I taking up gross neuroanatomy in order to establish a firm foundation for the study of microscopic neuroanatomy which is fully described in Part II. Throughout Part I, attention is continuously drawn to those general anatomic relationships and concepts which form the basis for the manipulations of practical medicine.

Part I—Gross Aspects of the Neural System: Spinal Cord and Surrounding Media. Structures Surrounding Brain. Cranial Nerves and Autonomic System. Topography of Brain. Association Connections of Hemispheres. Interior of Hemisphere. Cerebellum. Midbrain, Pons and Medulla. General Gross Features of Transverse Sections.

Part II—Microscopic Anatomy of Neural System: Spinal Cord. Microscopic Anatomy of Medulla Oblongata. Pons. Mesencephalon. Sections Through Thalamus and Associated Structures. Morphology and Physiologic Mechanisms of Diencephal and Related Structures. Cerebral Cortex. Bibliography.

* * *

*Cancer Manual*, by the Cancer Committee of The Iowa State Medical Society. Athens Press, Iowa City, Iowa.

This volume represents the second edition as a compendium for the medical profession for the physicians of Iowa as a "Cancer Manual." Doctors A. W. Erskine, S. F. Singer and D. F. Ward appear to have been the leading authors. It is composed of 160 pages of general information covering every phase of cancer from incidence to a very complete bibliography. The discussions begin with skin cancers and end with those involving bones. One chapter is allotted to hematologic malignant problems, and another chapter briefly deals with treatment, especially by radiation. The authors have tried to emphasize all those brief facts concerned with cancer in its earliest phases, with considerable space also allotted to the late symptoms of malignancy. Every opportunity is utilized in this book, to give the average physician all the common facts about cancer with as much brevity as possible, and therein lies the value of such a book. It apparently is distributed to the physicians in Iowa without charge. All in all, it is a splendid resume, in brief, of facts about cancer.—JACK C. NORRIS, M.D.

* * *

*Ulcer: The Primary Cause of Gastric and Duodenal Ulcer: Diagonsis, Medical and Surgical Treatment, Prevention.* By Donald Cook, B.A., M.D., Cloth. Price $5. Pp. 192. with 27 illustrations. Medical Center Foundation and Fund, 30 N. Michigan Ave., Chicago 2, 1946.

The author has written in an interesting manner the medical facts and theories surrounding the most widely discussed topic—peptic ulcer. He mentions all the common theories of ulcer causation and notes the factors that are not explained in each of these theories. Then he speaks of the "primary cause" of ulcer, whether gastric or duodenal, which is his contribution to the subject. It is based on ischemia and anemia of the stomach mucosa and wall, due to pressure against the stomach by the posterior wall of the liver and behind by the spinal vertebral bodies, the crura of the diaphragm and the firm prevertebral tissue. He pays especial attention to the length of time the ulcer-bearing area of the stomach is held in the angle of the hepatovertebral notch and the severity of the pressure and the anemia which results. This lowering of tissue resistance predisposes to ulcer formation. He then ingeniously fits all the theories into his "primary cause" and works out treatments in the same way, fitting in the various factors of treatments, complications and surgery. He quotes at length from the work of Sippy, which he describes as "a classic" which made ulcer a "medical condition" and perfected "a treatment" to which little has been added in the last thirty years. He has added a concept of the pathologic condition which fits into the ideas of decreased resistance of the stomach wall that allows the digestive action of the secretions of the stomach, hydrochloric acid, activating pepsin, to cause peptic ulcer. Also, he explains the good effects of frequent feeding and use of alkali in medical management, largely on the basis of drawing the ulcer-bearing area of the stomach away from the hepatovertebral notch rather than on the ground of acid control.—*The Journal of the American Medical Association*, Aug. 7, 1948.

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## UROLOGY AWARD

The American Urological Association offers an annual award of $1,000 (first prize of $500, second prize $300 and third prize $200) for essays on the results of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Biltmore Hotel in Los Angeles, May 16-19, 1949.

For full particulars write the secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis 3, Tennessee. Essays must be in his hands before February 15, 1949.

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THE JOURNAL
OF THE
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# MODERN CLUES IN THE DIAGNOSIS AND TREATMENT OF PRIMARY CARCINOMA OF THE LUNG

William A. Hopkins, M.D.
Osler A. Abbott, M.D.
*Atlanta*

Prior to 1933, when Graham[1] performed the first successful pneumonectomy for carcinoma of the lung, this disease constituted an entity of diagnostic interest only. During the interval of fifteen years which have passed since then, great advances have been made in both the methods of recognition of the disease and its treatment. When one surveys the literature relative to bronchiogenic carcinoma, one cannot help but be discouraged by the prognosis which this disease entails at this time. The study with which this communication concerns itself was carried out, in the main, in the hope that one might find both some cause for this discouraging outlook and some hope or method for the eradication of such a cause.

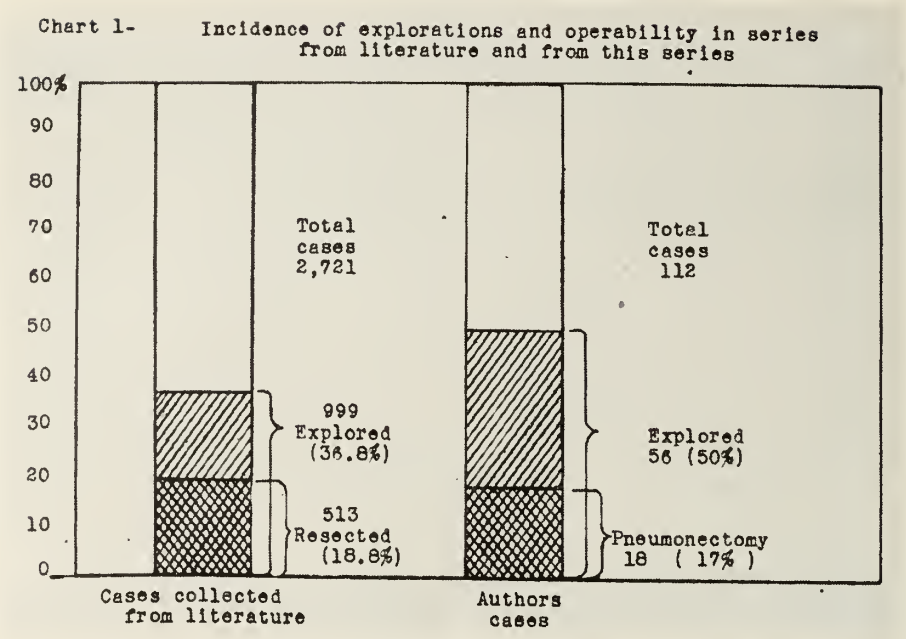
The early recognition of cancer in any form is now accepted as the strongest weapon at hand for the present day treatment of malignancy. The concensus of all reports of studies made relative to carcinoma of the lung, studies which have been carried out in widely separated sections of this country, have uniformly shown that satisfactory early recognition of this disease has not yet been obtained. It is, therefore, our main hope and purpose in this communication to present what we may have been able to gain by the study of our own individual group of cases which may lead towards earlier recognition of the disease.

A consciousness of the possibility and probability of carcinoma of the lung is a necessity towards its early recognition.

The early diagnosis of bronchiogenic neoplasm is difficult. The fact that the great majority of patients with this disease are discovered late predicates that actually very little can be known of the truly early symptoms, signs and other diagnostic findings. The disease is insidious in its onset, and has been graphically described by Overholt[2] as "masquerading" in character. The fact that the combined area of both lungs and of the contained bronchial tree is essentially larger than the area occupied by any other single organ, or pair of organs in the body, and that any portion of this large area may be a primary site of disease, demands that there will be a considerable variation in the early symptoms and signs in individual cases of pulmonary carcinoma. Furthermore the malignancy itself can vary tremendously in its actual cellular structure. Thus, considering this group of variants, one must expect to study a considerably variegated disease complex.

In this study we have gathered detailed information on 112 cases personally observed by us in the past two years. We have included in the study group only cases in which a positive pathologic diagnosis of the disease was present and the lesion conclusively proven. Patients included in this study were seen and followed either on the Thoracic Surgical Service at Emory Uni-

From the Department of Surgery (Thoracic), Emory University School of Medicine.
Read before the Medical Association of Georgia, Atlanta, April 29, 1948.




versity Hospital, or on the Thoracic Surgical Service at Lawson-Veterans Administration Hospital. A considerable number of patients with pulmonary malignancy studied at the Henry Grady Memorial Hospital are not included in this study, in part because of the difficulty of follow-up in patients of the city hospital caliber, and also because of the almost uniformly far-advanced state of the disease with which patients in this group present themselves.

We wish to emphasize the extremely short interval of time; namely, two years, involved in this investigative group and that no attempt is made to predicate or conclude survival rates, but rather that the main purpose of this paper is to increase our individual knowledge of the disease, to consider the early symptomatology, and to promote an increased consciousness of this very serious and not uncommon disease entity.

*Results of the Study*

A total of 2,721 cases reported in the recent literature were grouped together and tabulated in regard to the expected operability in this group. This is demonstrated by chart 1, which shows that 999 cases, or 36.8 per cent, were considered operable when the diagnosis was made. However, upon exploration only 513 were found to be candidates for pulmonary resection. That is to say that 18.8 per cent of the total group of patients could be classified as operable at the time of exploration; or to state it in another form, 52 per cent of those upon whom operation was performed were found to have the disease in a sufficiently early stage to justify major resection. The survival rate of this large group is not yet complete, due to the involved time element. It has been reported by several authors that the survival rate extending over a five-year period, postoperatively, will approximate two-fifths, or 40 per cent, of the total resected.[3]

It is encouraging to note that in the more recent groups in these recorded series the percentage of patients explored and resected is considerably higher than in the earlier case reports. Essentially three major factors are involved in this encouraging improvement rate; namely, (1) increased consciousness of the disease by the medical profession; (2) improved methols for

earlier diagnosis, and (3) technical improvements allowing an extension of the criteria for resectability in carcinoma of the lung. In our own group of 112 patients there is a striking similarity within this small study group to that of the over-all total as seen in the first chart relative to percentage rate of exploration and resection.

No suggestions appear either in our study, or in the over-all study of the larger group mentioned, relative to any definite etiologic factor of carcinoma of the lung. Statistical data have been presented at intervals by certain authors to suggest the incrimination of certain agents, such as cobalt and other irritating inhalants, but on statistical sub-study none of these has been of actual statistical significance. The same criticism may be borne out upon the claim that carcinoma of the lung is actually on the increase. The role of tobacco, in relation to carcinoma of the pulmonary system, is not considered to be of any etiologic significance inasmuch as both in the over-all series and in our own the percentage of smokers to non-smokers having carcinoma of the lung was almost exactly the same as that in the over-all population; namely, approximately 70 per cent of both our patients and the general population were classified as users of tobacco. It has been suggested by Graham and Womack that there is a greater tendency to carcinoma in patients having congenital abnormalities of the pulmonary system. Other authors have suggested that chronic pulmonary infection may predispose towards a higher incidence of carcinoma of the lung. These are interesting considerations, but the evidence for the same is still far from conclusive.

Previous reports relative to carcinoma of the lung have shown an almost constant time interval from the onset of symptoms to the time of specific diagnosis and therapy, ranging from ten to thirteen months. In Overholt's study there was a three-month delay subsequent to the onset of symptoms prior to the patient's first consultation with a physician. This delay was followed by a further delay of eight months prior to having an x-ray film taken, and a subsequent delay of thirteen months following onset of symptoms before definitive diagnosis and therapy were instituted. In our own group of 112 patients the delay in consultation with a physician was not essentially different from that of the previously mentioned study. The time of taking of the x-ray was somewhat earlier but still, in the over-all group, there was an average elapsed time from distinct early major symptoms until consultation with a thoracic surgeon of eleven months. There is a considerable range in this time interval, varying from the occasional patient discovered in a screening program and seen actually prior to the onset of any true symptoms, to patients who have had symptoms for twenty-four months or even longer.

Several patients gave a history of distinct hemoptysis for a period of four years prior to their referral to this Clinic, bringing up the supposition that the actual malignant lesion was probably not existent for this time, but that a prodromal lesion such as an adenoma or mixed tumor or other cause of hemoptysis pre-existed the actual carcinoma. From the review of this factor one is still impressed that there is too long a delay from the onset of symptoms until definitive therapy is carried out, and this delay is in part due to the patient, and in part due to delay on the part of the physician. One is also impressed with the value of the x-ray screening program with the discovery of patients either prior to or practically at the onset of definite symptoms and that these patients have uniformly been in a resectable condition.

| | | | |
|---|---|---|---|
| RIGHT UPPER LOBE | 30 | LEFT UPPER LOBE | 21 |
| RIGHT MIDDLE LOBE | 4 | LINGULA | 3 |
| RIGHT LOWER LOBE | 23 | LEFT LOWER LOBE | 21 |
| RIGHT APEX | 4 | LEFT APEX | 2 |
| RIGHT PERIPHERAL | 6 | LEFT PERIPHERAL | 6 |
| TOTAL | 67 | TOTAL | 53 |

Chart 2 - Distribution of tumors in the various portions of the lung.

Chart 3- Graphic representation of age incidence in 112 cases

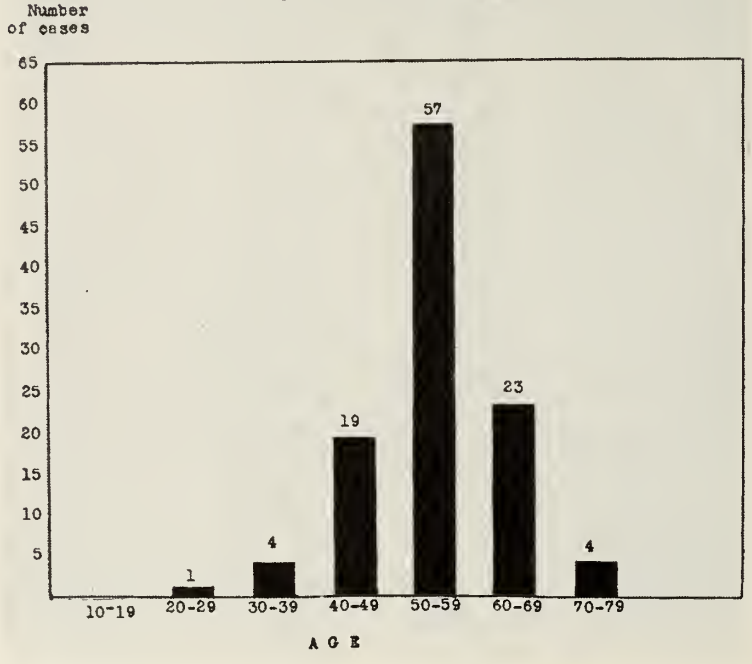
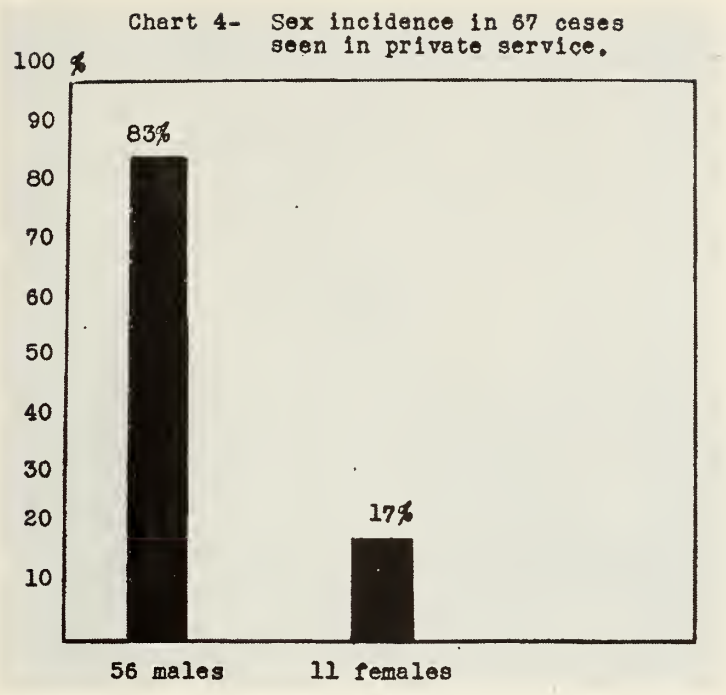
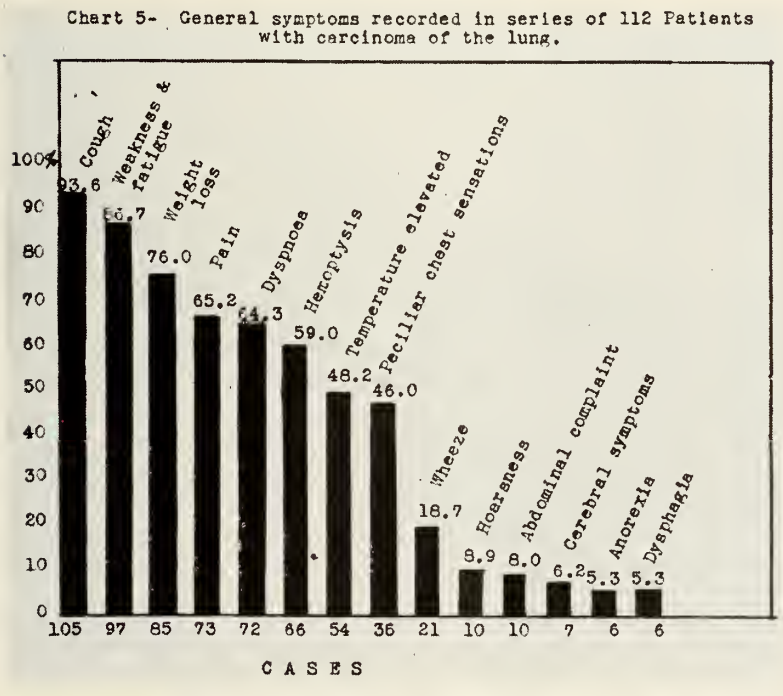



Chart 2 shows the distribution of the tumor in the various portions of the lung. There were 67 cases arising in the right lung, whereas 53 occurred in the left. The upper lobes were implicated in 54 cases, or slightly less than half of the total number. It is not felt that this group is sufficiently large to predicate any greater tendency for the disease to occur more in one area than in another, but rather to suggest a very equal liability of any area of lung to be involved. The question of age incidence of this disease has always stressed the frequency in the older age groups and this is confirmed in our study in chart 3. The youngest case encountered was 28 years, while the oldest was 77. The average age for the entire group was 53.4 years. The important factor designated is that approximately 94 per cent of the lesions occurred in the age sector between 40 and 69 years of age, with the most commonly involved decade being from 50 to 59 years.

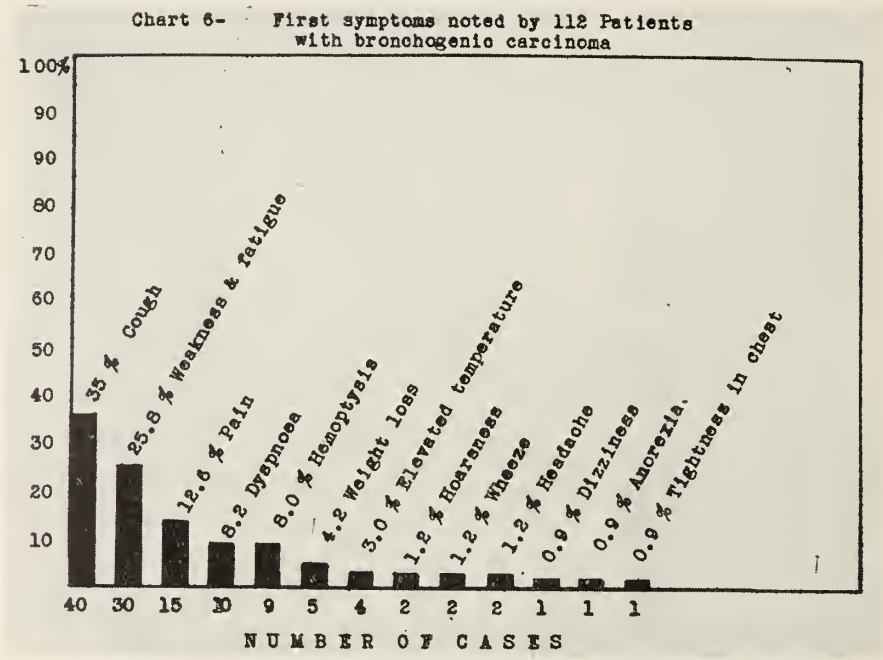
As found in other studies[3,4,5,6,7,8,9] carci-




noma of the lung is predominately a disease of males. The sex incidence in this study is demonstrated in chart 4. Inasmuch as only 67 of the patients were selected from a group which should normally represent an equal distribution of the sexes, this chart is confined to that group studied at Emory University Hospital. The remaining cases, as stated, were taken from patients seen at Lawson VA Hospital, a facility admitting exclusively male patients. Thus, in the mixed study group, 16.3 per cent of the patients were female and 83.7 per cent were male.

Particular attention in this discussion was placed upon the symptom-complex pre-




sented by the individual patients. This is graphically demonstrated in chart 5, which shows the principal symptoms noted in this series. Cough is distinctly the most important over-all symptom and was found to occur in 93 per cent of the patients. The frequency of cough in the over-all population is so high that it is important to clarify this symptom more fully. A great number of the patients described a long story of cough, usually one of a dry or hacking type and considered by the patient to be a "smoker's cough" which had been in existence for several years. The important factor is that some change occurred in the cough, causing the patient to consult medical aid. In almost all cases the cough had become more aggravating and persistent. In fact, any change in the pattern of the long-standing cough is strongly suggestive that some serious change has occurred in the pulmonary tree. Therefore, great emphasis is placed by all who are concerned in the study of this disease upon "any change in the cough pattern."

The classic course of a cough in pulmonary carcinoma is to transform from being a non-aggravating, mild cough habit to an irritating, persistent cough frequently disturbing sleep and having a considerable tendency toward paroxysms. As the underlying neoplastic disease progresses, secondary infection occurs and the irritating nonproductive cough may be transformed into a productive one. During this period of transformation the dry cough may become a cough productive of clear foamy material, and finally of definite purulent material and ultimately of material streaked with blood. The time interval in a transformation of such cough may be extremely varied, depending upon the location of the tumor and the time taken for active secondary infection to intervene.

Weakness and fatigue, considered as a general group complaint, assume considerable prominence in this series of patients with bronchiogenic carcinoma, being present in 86 per cent of the total. One would expect this to be a common symptom in the latter stages of the disease, but it is vitally important to describe the fact that 27 per

cent of the over-all group presented this as their first symptom. Again we have a symptom which is of very frequent occurrence in the over-all population. We are all familiar with the frequency of fatigability in any chronic illness as well as in many psychiatric disturbances. It is important to stress that this weakness and fatigability complaint is essentially one of a decrease of activity reserve; namely, that the individual becomes physically fatigued upon carrying out a relatively small proportion of activity compared to that which he could attain prior to the onset of his illness. The fatigue is not one with which one awakens but usually one which appears as the day progresses. This is important to emphasize, in that it tends to segregate this type of fatigability from that of psychiatric origin

It has been felt that a considerable cause of this symptom in carcinoma of the lung has been related to underlying pulmonary infection. It is seen that these patients do appear to achieve some decrease in the symptom as the infection is brought under control; however, we are impressed that the relief of this symptom is far from striking in the carcinoma patient, even with adequate bronchial drainage and with chemotherapeutic agents. Therefore, we would like to stress the importance to be attached to the patient having persistent fatigability following a distinct episode of pulmonary infection, such as pneumonitis, which so frequently occurs about these lesions and which so often may be misdiagnosed as atypical pneumonia or bronchopneumonia of other causes.

The third in the list of common symptoms is that of weight loss which may often be extremely distressing. The loss of weight in the amount of 50 pounds may occur. The mechanism producing this in carcinoma of the lung is not definitely understood. It is our impression, from our personal experience, that the secondary infection is probably the greatest factor in this weight loss. This statement is made in view of the weight gain which may be reported following palliative procedures in far-advanced nonresectable cases where the palliation stresses reduction of infection, *per primum*. Also, in patients who have had a chronically infected lung removed and subsequently die from their carcinoma, a temporary period of considerable weight gain may occur. However, in some instances, patients without definite secondary infection may show evidence of considerable weight loss and the cause of such weight loss must be placed upon the carcinoma itself.

Another prominent symptom in carcinoma of the lung is that of pain. The pain may be of essentially two origins; namely, one of involvement of the parietal pleura, chest wall, or nerve trunks located in or about the chest wall. This type of pain is usually quite constant, severe and well localized. It is this type of pain which has an associated poor prognosis because so often the pain is due to invasion of the structures by extension of the lesion. However, this is not necessarily so inasmuch as there may be involvement of the parietal pleura secondary to infection distal to a carcinoma. There is a considerable tendency for this type of pleuritic pain to be recurrent and not constant. A more vague type of pain and discomfort may be associated with the lesion within the lung parenchyma itself. This pain varies greatly in its description by the individual patients. Frequently these patients note this pain as a type of fatiguing discomfort associated with activity or as the day progresses. This pain is transmitted to the cerebrum through the autonomic nerve trunks and is therefore liable to be quite vague and difficult for the patient to define. In our series of patients, 65 per cent presented some form of chest

pain, and this was usually located on the side of the lesion. Although pain carries a poor prognosis, especially if it is of the type due to irritation of the parietal pleura, this symptom alone is not classified as a contraindication to surgery. This is because such pain might be due to infection distal to the tumor or that this area of pleural involvement or chest-wall invasion may also be eradicated surgically at the time of operation.

Disturbances of respiratory function are a common complaint in pulmonary carcinoma. The symptom of dyspnea was found to occur in 64 per cent of our cases. In some cases this symptom is rather easily explicable inasmuch as there was a considerable amount of atelectatic lung sufficient to disturb respiratory reserves. However, in certain small peripheral lesions this was also found to be a frequent complaint, and the cause of this dyspnea is not clear. In certain patients the dyspnea was aggravated by certain positions, especially by lying on one side or the other. We could not find a constant association in this regard, but rather that a patient might have difficulty either lying on the involved or the noninvolved side of the chest. Considerable interest has been expressed by other authors[4] in what is termed as the "sighing syndrome." This is the phenomenon of the patient who suddenly has a desire to take a maximal deep breath. They frequently state that they have a sensation that they are not able to aerate their lungs sufficiently, and that this is done as an attempt toward better aeration. This does occur frequently enough in carcinoma of the lung to consider the symptom of importance, and if one is presented with this symptom satisfactory radiologic studies are indicated. However, this sighing syndrome is very frequently seen in psychoneurotic patients and is not necessarily indicative of intrinsic disease of the lung.

The importance of the coughing up of blood has been greatly stressed in the lesions of the pulmonary system. In our group of patients this occurred in 66 cases, or 59 per cent. This hemoptysis varied from streaking to gross hemoptysis and was classified as gross hemoptysis when a teaspoonful or more of blood was brought up at one time. Gross hemoptysis occurred in 28 per cent, while streaking occurred in the remainder. The production of blood may be seen either early or late in the course of the disease. Usually is is preceded by cough, fatigue and purulent production, suggesting the probability that it is caused by secondary infection of the neoplastic area.

Most commonly, therefore, hemoptysis is usually seen when secondary infection has intervened, and we therefore feel that it is to be classified as a relatively late symptom. Statistical analysis of the symptom of hemoptysis has shown that the most frequent cause for the coughing up of blood varies in the age brackets: (1) below 20 years old; (2) from 20 to 40; and (3) over 40 years of age. Beyond the age of 40, hemoptysis is most commonly caused by a carcinoma of the lung, and therefore any patient in this age group producing blood must be subjected to detailed diagnostic study. With major episodes of bleeding, patients may be able to localize the lesion due to unusual sensations in the chest at the site of origin.

One cannot help but be impressed by the frequency of a history of episodes of respiratory infection in analyzing the histories of these patients. Major episodes of respiratory infection occurred in 53 per cent of our patients. This infection was diagnosed as either "flu" or "virus pneumonia" in 60 per cent of those describing such major episodes. As we know, virus pneumonia is predominantly a segmental disease, and carcinoma in the bronchi leading

to individual segments may produce localized atelectasis and infection in the segment beyond the point of origin of the tumor. One may readily see therefore the confusion between the two diseases on the x-ray films, and actually these two diseases can intimately mimic one another. Any patient, therefore, with so-called atypical pneumonia in whom the lesion does not disappear over a period of two weeks should be considered for further investigation, particularly the use of x-ray films taken in various projections, and the possibility of bronchoscopic investigation.

Many of our patients had been carried along under the tentative diagnosis of unresolved pneumonia or atypical pneumonia for several months before the true nature of the underlying disease was suspected. A pneumonia which undergoes a resolution of such a delayed type should certainly be subjected to bronchoscopy at a much earlier stage of the game, both in order to rule out more serious underlying disease and to protect the involved area of the lung from undergoing permanent destruction.

We have been particularly interested in the peculiar or bizarre sensations with which patients having chest diseases may present themselves. This has been of particular interest in the patients with pulmonary carcinoma. So often the lesions have transmitted evidence of their presence to the individual carrying the disease through the autonomic nervous trunks that a very vague and ill-defined sensation is described. Frequently, the patients themselves tell us that there are unusual sensations in the chest which they "frankly cannot define or describe." In some cases a tightness, fullness, heaviness, sticking or stinging sensations, or an area of tiredness, are described. Several patients stated that air would not enter into a particular region of the lung, and this corresponded well to the location of their neoplasm. For instance, one patient stated that when she inhaled some camphor that it penetrated all the portions of her lung except one area over the right upper lobe. This was the exact site of her primary neoplasm. A constant sensation of fullness was present in 8 patients, and 6 of these presented massive pleural effusion. When tightness was described as a constant or relatively severe sensation, the patient usually presented x-ray evidence of atelectasis.

In 18 per cent of our group a sensation of a wheeze, usually of a localized character, was described. In some patients this wheezing sensation varied with changes of position. Certainly, any patient describing a localized wheeze is describing an area of bronchial obstruction. Any patient describing bronchial obstruction definitely should be investigated for possible neoplastic origin of that obstruction. We are particularly impressed with a number of our patients in whom this wheeze was incorrectly evaluated, and the symptom ascribed to an asthmatic cause. Localized bronchial asthma does occur, but it is a relatively rare disease and demands considerable investigation for proof. Certainly, any patient in the carcinoma-age group presenting a localized wheeze should be strongly suspected and thoroughly investigated.

It is common knowledge that chronic pulmonary diseases may produce many and varied abdominal complaints. These complaints may range from a mild dyspepsia to severe abdominal pain. Patients presenting gastro-intestinal complaints for which no cause can be ascribed in the gastro-intestinal tract should routinely have adequate x-ray studies of the chest. We were particularly interested in 3 of our patients in whom there was proven extensive invasion of the left vagus nerve, all of whom presented themselves with the complaint of a severe

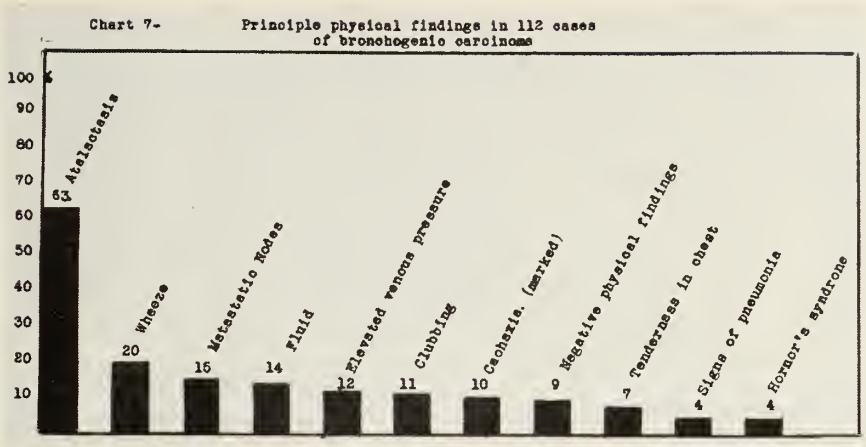
and uncontrollable diarrhea not responding to the usual medications. Of course, in the later stages of the disease metastasis is apt to occur in the liver and throughout the peritoneal cavity. These are an obvious cause for abdominal distress in the later stages of pulmonary carcinoma. However, it is necessary to emphasize that gastrointestinal complaints can and do occur in carcinoma of the lung prior to the spread of the lesion out of the involved hemithorax. Dysphagia was also complained of in 6 cases, and in 5 of these patients there was evidence of massive metastatic involvement of the mediastinal lymph nodes with displacement and obstruction of the esophagus either by extrinsic pressure or by actual invasion of the disease.

Temperature elevation had been present in 48 per cent of the cases when first seen by us, and this was due to pulmonary infection distal to the carcinoma. As the inflammatory lesion becomes more chronic in the lung, the febrile response tends to disappear even in the presence of multiple areas of pulmonary abscess. Shaking chills were described in 15 per cent of the patients. This was usually associated with attacks of pneumonitis.

The symptomatology was next evaluated in regard to the relative time of onset of individual symptoms with particular interest upon the first symptom noted. This is presented in graphic form in chart 6. Cough was described as the first symptom in 40 patients. while weakness and fatigue followed closely or was the first symptom in 30 patients. Pain as an initial symptom was described by 15 patients, and this was usually of pleuritic type and associated with episodes of respiratory infection. In only 9 patients was hemoptysis described as the initial symptom, and in 4 of these this symptom had been present for three or more years.

In the early stages of the course of the disease of carcinoma of the lung, physical signs are apt to be extremely minimal or actually absent. The physical signs will vary according to the position of the neoplasm and the involvement of bronchi. As the lesion enlarges in the region of a major bronchus, atelectasis will appear. The major finding in the early stage of the disease is usually the signs of an area of pneumonitis, or emphysema, and the signs are very apt to be localized to a particular segment or lobe. An audible wheeze may be heard if the bronchial obstruction is only partial. The most important factor, therefore, in consideration of physical findings in the patient with early carcinoma of the lung is that there are liable to be no abnormal physical findings present. In the later stages of the disease, one may find evidence of tenderness of the chest wall, obstruction to the superior or inferior vena cava with collateral venous circulation visible, palpable lymph nodes, and signs of pleural fluid. Also one may note evidence of weight loss and appearance of chronic illness. Clubbing of the fingers or pulmonary osteoarthropathy were present in 11 patients. Frequently this phenomenon may produce tenderness and pain, especially over the lower third of the tibia and fibula. It is interesting to note that several of the patients presenting osteoarthropathy had small peripheral neoplasms without evidence of secondary pulmonary infection.

Localized areas of tenderness over the chest wall were present in 7 patients. Two of these patients were discovered to have direct extension of the tumor through the thoracic cage, while 3 others had evidence of metastatic lesions in the ribs. It is felt therefore that localized chest-wall tenderness is usually a bad prognostic sign and requires careful examination for evidence of metastatic disease.. However, this is not necessarily evidence of extension of the neo-




plastic lesion, but can be produced by infection distal to the area of neoplasm.

Of fundamental importance in the early diagnosis of carcinoma of the lung is early x-ray examination of the chest and adequate interpretation thereof. In this entire series, the x-ray examinations presented positive evidence of disease in every patient. Unfortunately, in some instances x-rays presenting positive evidence of disease that had been previously interpreted as being "within normal limits." It is important to appreciate that in the routine posteroanterior view that certain areas of the pulmonary fields may be obscured from view by the mediastinal contents, the diaphragm, or by the clavicles and upper ribs. This stresses the need for lateral and oblique views in certain cases. Furthermore, the small screening x-ray films may not define some of the early lesions and certainly, if symptoms are present, better x-ray detail is required.

Our next greatest adjunct in the diagnostic armamentarium is the use of bronchoscopy. It is important to appreciate the relatively small area of the tracheobronchial tree which is available for direct examination by the bronchoscope. One must pay particular attention to indirect evidence of bronchial obstruction distal to the range of bronchoscopic vision. Thus, a major lobe orifice may be rotated, pulled upward or downward by an atelectasis of one of its segments or atelectasis of a segment in an adjoining lobe. As pulmonary carcinoma has been undergoing progressively earlier bronchoscopic investigation, the incidence of visible neoplastic involvement allowing positive direct biopsy has progressively decreased. Bronchiogenic carcinoma has a known tendency to grow along the wall of the bronchus, both peripherally and proximally towards the main stem bronchus. The lesion also has a desire to travel along the submucosal lymphatics. Therefore, the later a lesion is investigated the greater chance that areas within the range of bronchoscopic vision will be involved. This does not necessarily predicate that a lesion which is visible is in the late stages, inasmuch as the tumor may arise in any part of the tracheobronchial tree. This matter is discussed in the main to emphasize the fact that it is now more common not to visualize the carcinoma with the bronchoscope than it is to visualize the primary area of disease. Therefore, a negative bronchoscopy in no way mitigates against the possibility that the patient is suffering from a carcinoma of the lung. A considerable adjunct in diagnosis has been the study of bronchial secretions[7] for evidence of neoplastic cells which have been shed into the lumen of the minor bronchi. This is most satisfactorily done by the use of the Papanicolaou stain and becomes of increasing value with the

increasing experience of the examining pathologist. In 64.4 per cent of our patients a positive diagnosis was obtained by the bronchoscope either by direct biopsy or by a study of the bronchial secretions. Direct biopsy was obtained in 64 patients, and positive findings were found in the bronchial secretions in 8 other patients in whom direct biopsy was not obtainable. Suggestive indirect evidence of neoplasm, or at least of atelectasis distal to the range of bronchoscopic vision, was present in 39 additional patients. In 12 of these patients a smooth stricture formation was noted for a considerable area proximal to the actual tumor. This was due to infection surrounding the tumor and involving the submucosal tissues. In 27 other patients there was found evidence of compression or distortion of the bronchial tree due to nearby atelectasis, by pressure of the tumor mass extrinsically upon the main stem bronchus, or by involvement of the mediastinal lymph nodes. In several patients probing of the orifice of the suspected segment with a flexible small suction tip gave evidence of obstruction, a marked bleeding tendency, and in some cases freed-up cells which could be gathered for study, and allowed us to make a definitive diagnosis.

For many years there has been a great interest expressed in aspiration biopsy of pulmonary masses. This procedure is still recommended and condoned in some of the outstanding institutions in this country. However, Ochsner[3] and others have reported proven instances of implantation of the tumor into the chest wall by the aspirating needle. Furthermore, there is a marked tendency toward aspirating atelectatic tissue distal to the actual tumor so that a negative needle biopsy is not of any absolute diagnostic significance. Also, there is a distinct possibility of carrying infection from the diseased area of lung into the pleural cavity as well as injury of pulmonary vessel with the needle. This procedure has very definite limitations, and we confine its use to patients in whom there is no consideration of resection, and therefore its value is of academic interest only. In summary then, the procedure of aspiration biopsy of suspected neoplastic lesions of the lung is strongly condemned in our clinic.

If there is sufficient question of the possibility of carcinoma of the lung, we would certainly prefer to recommend exploratory thoracotomy rather than a less definitive and markedly limited procedure such as aspiration biopsy. There is a very distinct place for exploratory thoracotomy in carcinoma of the lung, and its early intelligent use has undoubtedly salvaged many patients in the past and will continue to do so in the future. If there is a suspicion of carcinoma of the lung, the only healthy attitude is to rule out the presence of the disease rather than to take the attitude of ruling it in.

Our series was then studied in relation to the cell type of carcinoma presented. In 64 per cent of our patients, the lesion was an epidermoid carcinoma, and certainly this group carries the best prognosis. Fifteen per cent of our patients had the oat-cell type of carcinoma, and in no instance in our group was an oat-cell carcinoma found in a resectable stage. Primary adenocarcinoma of the lung was present in 15 per cent of patients and, although the prognosis was not as desperate as that in the case of the oat-cell type, it was certainly considerably worse than that seen in a squamous-cell carcinoma.

It is not the purpose of this paper to lay stress upon the therapeutic aspect of carcinoma of the lung. Suffice it to say, that the only accepted method of treatment of the disease at the present time is that of radical surgical excision. A total pneumonectomy

should be performed, and there should be an associated radical excision of the mediastinal lymph nodes. In rare cases, a lobectomy may be resorted to rather than a pneumonectomy, but in all such cases lobectomy is considered to be a method of palliation rather than a method of cure. In 15 of the 18 resected patients in our series, the tumor had progressed to the bronchial and tracheal lymph nodes. Areas of direct invasion of the chest wall or pericardium are of course excised at the time of resection. In relatively recent years the clinical evidence of involvement of the recurrent pharyngeal or phrenic nerves was considered to be a contraindication to operation. This premise is no longer tenable inasmuch as patients with involvement of these nerves have undergone successful resection and have survived over five years subsequent to resection. The presence of clear fluid in the involved pleural hemithorax is suggestive evidence of a far-advanced stage of the disease, but inasmuch as this fluid may be produced by the infection surrounding the lesion, it does not necessarily preclude the possibility of resectability. In our experience the presence of bloody fluid has uniformly proven to be associated with a non-resectable lesion. In summary then, the indications for resection are that any patient in whom carcinoma of the lung is present, and there is no objective evidence of spread of the disease beyond the involved hemithorax, should be subjected to exploration and possible resection.

It is discouraging to note that only 56 of the 112 patients here discussed presented evidence of the lesion still being confined within the involved hemothorax. Therefore only 56 of the patients were subjected to exploration, and only 18 of this group were found to have the lesion in a sufficiently early stage to justify total pneumonectomy.

It should be mentioned that the criteria for resectability have been broadened during the past year and that therefore the instance of resectability per case of exploratory thoracotomy is increasing not only in our own series but in those reported by other authors. In 5 of the 56 explored cases, lobectomies were carried out for palliative reasons. In the total operative group of 56 patients, there was only one postoperative death, occurring 20 days following surgery, and in this patient it had been necessary to resect a large portion of the trachea and contralateral bronchus, and implant an artificial tracheobronchial pathway. Of the 18 patients who have undergone resection, 8 have subsequently died. It should be noted that 4 of these deaths were due to progression of the disease, while the other 4 were from completely unassociated causes, such as coronary occlusion. To date, 8 of the resected patients, or 7.2 per cent of the total of 112 patients, are living without demonstrable evidence of recurrence or persistence of the disease. However, the time interval is far too short to attach any significance to these figures. It is valuable to note that statistics from other studies suggest that a patient who survives one year following total pneumonectomy, without evidence of persistence of his disease, has approximately an 80 per cent chance of surviving throughout the five-year postoperative period, with consequent hope of successful cure of the disease. The remaining 2 patients who have undergone pneumonectomy are living, but show evidence of early recurrence of disease, six and nine months following operation.

It is not felt that exploration entails any untenable risk and that it does not appear to shorten the life expectancy of the inoperable patient. The patients in whom exploration was not advised had an average survival rate, following positive diasnosis, of 3.6 months. This was subject to a considerable range, extending from a few weeks

to as long as 13 months. The fact that they were not explored, of course, is indicative of the extensiveness of their disease at the time of positive diagnosis. In the group undergoing partial resection of the lung, 1 of the 5 patients has subsequently died of his disease. One has evidence of recurrence of the disease 12 months later. One of the patients must be classified as a postoperative death, one has evidence of recurrence of the disease 12 months later, and the other patient shows no evidence of recurrence 5 months following surgery.

During the past year we have no longer felt that extension of the tumor up into the trachea or into the carina constitutes a criterion of non-resectability. This extension is particularly apt to occur in tumors arising in the right upper lobe bronchus. During the past year, 5 patients presenting this type of extension have undergone radical resection including removal of portions of the trachea, carina and contralateral bronchus. Two of these patients are still alive without evidence of recurrence of the disease, and it is hoped that actual salvage may have taken place. One patient is alive 10 months following surgery with evidence of recurrence of the disease in the form of metastasis to one femur. One patient succumbed 20 days following operation and the other patient died 2½ months following resection due to a transverse myelitis of neoplastic cause.

In the over-all consideration of the study group, we have been able to obtain satisfactory follow-up data in 98 of the 112 patients. Seventy-one per cent of the entire group have already succumbed to their disease. The average life expectancy in this group of 71 patients, from the onset of symptoms to the time of death, was found to be 16.7 months. The disease is subject to considerable variation, in some being extremely rapidly progressive and causing death in 4 months from the onset of symptoms, while in rare instances a much longer life span may occur. Thus in one patient a life span of 52 months was noted following the onset of specific symptoms.

It is felt to be outside of the range of this presentation to give any detailed discussion of methods of palliation in the inoperable lesions. In some cases there has been some evidence of palliation with the use of deep x-ray therapy. In general, the benefits of deep x-ray therapy have been of considerable disappointment except in patients in whom there has been considerable associated infection; and radiation therapy, plus shrinkage of the obstructing lesion, has produced palliation by alleviation of the underlying inflammatory lesions. This has also been achieved in some patients by partial removal of the endobronchial areas of carcinoma with the bronchoscopic biopsy forceps. We have not attained any striking results with such agents as $HN_2$ or so-called "nitrogen mustard," despite its use in 14 patients. In occasional instances, nerve block or rhizotomy has achieved some degree of palliation in patients with advanced chest-wall invasion and nerve involvement.

### *Summary and Conclusions*

We have attempted to discuss the symptomatic and diagnostic measures involved in the disease entity of primary carcinoma of the lung. Certain statistical data from a group of survey studies reported in the literature have been enumerated. A detailed evaluation of 112 proven cases has been described. The over-all outlook for patients with carcinoma of the lung remains considerably grave, but during the past 15 years a distinct tendency towards improvement has been noted. The disease in its early stages constitutes a very difficult diagnostic problem. It is not a rare disease. It is felt that with an increasing consciousness of the disease by the medical profession, a

definite diagnosis of carcinoma of the lung will be made more frequently and at an earlier stage than now exists. The symptoms are varied, and the disease entity tends to be imitative of other pulmonary lesions and has well been described as a "masquerading disease." It is especially important to reiterate that 54 of our 112 patients presented the disease arising in the upper lobes and, in general, these patients attained a specific diagnosis relatively later in their disease because of confusion with what was suspected to be tuberculosis. These two diseases have been noted to occur simultaneously in 6 patients of the entire series. It is felt that the average duration of disease from the onset of symptoms to the making of a definitive diagnosis constitutes a major factor in the present over-all poor prognosis of the lesion. Certainly, the making of a definitive diagnosis during the twelfth month of a disease which has an over-all life expectancy of 16.7 months emphasizes this point. It is felt that an increasing consciousness of the disease, of the symptom-complex associated with the disease, and the earlier use of adequate x-ray studies should shorten considerably this disastrously long time interval.

The physical findings in the early stages of cancer of the lung may be minimal or absent and, at most, are only those of a localized area of pulmonary inflammation or obstruction. The intelligent use of the bronchoscope, with appreciation of its limitations, can be of extreme value in the early diagnosis of this disease. The recent addition of the pathologic study of bronchial secretions has allowed earlier recognition of lesions arising distal to the range of bronchoscopic vision. Whensoever the suspicion of carcinoma of the lung arises, the healthy attitude is to rule out the possibility of cancer rather than to rule it in. There is a distinct place for exploratory thoracotomy, both in the diagnostic and therapeutic armamentarium utilized in this disease. Of the different cell types encountered, it would appear that the squamous-cell carcinoma carries the best prognosis, while the oat-cell type entails the most discouraging. Total pneumonectomy with radical excision of the mediastinal glands constitutes the only hope of cure of this disease at the present time. In rare cases, lobectomy may be resorted to as a palliative measure, but it is not recommended as a curative procedure. Both the operation of exploratory thoracotomy and of total pneumonectomy entails a risk of less than 6 per cent, which is fully justified in dealing with a uniformly otherwise fatal disease. Methods of palliation in the far-advanced cases have been briefly discussed. Our major interest in presenting this study has been in attempting to evaluate the early symptoms and the sequence of symptoms seen in carcinoma of the lung. Particular stress has been laid upon a change in the patient's "cough pattern," upon the symptom of weakness and fatigue, upon the role of dyspnea and vague and bizarre chest sensations. The use of so-called x-ray screening programs has in some cases presented us with patients in whom the disease carcinoma of the lung had existed prior to the onset of symptoms. Such patients carry a uniformly good prognosis.

In conclusion, therefore, we wish to state that an improved outlook for carcinoma of the lung requires a greater consciousness of the disease, both by the layity and the medical profession. This consciousness plus early use of x-ray and bronchoscopic investigation, with a full understanding of the limitations of these procedures, constitute the fundamental weapons for attack upon this disease.

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# TESTICULAR NEOPLASMS

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The subject of testicular neoplasms is one of the most amazing and intriguing in the realm of pathology. The wide diversity of opinion as to classification, interpretation and treatment is a topic of confusion. In an analysis of over 1000 cases by Moore, Lewis and Friedman, the classification follows in general that of Ewing, which seems well accepted, the chief difference being that Lewis and Moore found chorioma with more frequency than did Ewing.

In a study of 922 cases Moore and Friedman place 96 per cent in four general groups with one sub-group. Lewis, in his study of 250 cases pretty closely correlates that of Moore. The four general groups listed by Moore are as follows: seminoma 35 per cent; teratocarcinoma 35 per cent; embryonal carcinoma and chorioma 19 per cent and teratoma 7 per cent. Interstitial cell tumors and miscellaneous types comprise the remaining 4 per cent.

A confusing point in the interpretation of these tumors is the frequency of mixed elements. In 4 per cent of the 922 tumors studied by Moore, embryonal carcinoma and seminoma elements were found. Six per cent of the embryonal carcinoma group contained fully differentiated chorioepithelioma tissue. Pure primary chorioma was found in only 0.4 per cent of the entire group. Focal chorioepithelioma was found in 12 per cent of embryonal carcinoma and teratocarcinoma. Focal chorioepithelioma was found in 6.4 per cent for the entire series. This is an astounding observation, since Ewing states that it would be hazardous to diagnose chorioma of the testis in the absence of pulmonary and hepatic metastases. The mad-hatter of the entire series is teratocarcinoma in which 77.5 per cent were mixtures of teratoma, embryonal carcinoma and/or chorioepithelioma; but 5 per cent were mixtures of teratoma and seminoma elements. Fifteen per cent had seminoma, embryonal carcinoma and/or chorioepithelioma elements. Two and five-tenths per cent showed heterogeneous mixtures of teratoma and neuroepithelioma, and even rare mixtures of teratoma and sarcoma.

Again referring to Moore, the histologic study of the primary tumor and the metastatic lesions regarding the potencies of the various cell types, and the dynamic balance between undifferentiated elements and teratoid structures, furnished considerable information. For instance, 90 per cent of the embryonal carcinomas metastasized as embryonal carcinoma or chorioepithelioma; teratoid structures were rare, while in 40 per cent of the metastases of teratocarcinoma there were embryonal carcinoma and chorioepithelioma elements with 60 per cent teratoid elements. In the metastatic lesions of adult teratomas 50 per cent were teratoid and 50 per cent were monocellular tumors. The study indicated that 27 per cent of the fatalities of testicular tumors showed chorioepithelioma elements regardless of the diagnosis of the primary tumor.

I realize quite fully that nothing is more confusing than a lot of percentages and

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statistical figures in a scientific paper, but testicular tumors are more confusing. The point I am trying to get across is the marked frequency of the chorioepithelioma elements found in the three groups of these tumors. In reviewing the literature one will note that "mixed tumors" are used quite frequently. If we accept Moore's concept, "mixed tumors" are the rule rather than exception.

An attempt at clarification will be made. Seminoma are monocellular tumors and ordinarily do not originate from pre-existing teratoma. These tumors are also called dysgerminoma, spermatocytoma and germinoma. They are tumors probably arising from the primordial germ cells. Embryonal carcinoma and teratoid tumors which are composed of evolving and differentiating somatic and trophoblastic tissues and are neoplastic expressions of the unlimited potencies of embryonic cells; these embryoma, embryonal adenocarcinoma and papillary adenocarcinoma are classified under the heading of embryonal carcinoma. The term teratocarcinoma is used to designate that group of tumors in which histologic malignant elements are found in combination with differentiated teratoid structures.

The diagnosis of a testicular tumor will in most cases be one of physical examination. Hydrocele, hematocele, orchitis or syphilis of the testicle may confuse the picture. The excretion of prolan A in the urine may confirm a doubtful diagnosis. I have had two cases of teratocarcinoma recently in which no hormonal excretion was found in the urine. Some writers feel that the presence of 300 mouse units of prolan A in a liter of urine is strong evidence that a mass present in the testicle is neoplastic. According to some writers, the amount of hormone present in the urine varies according to the degree of malignancy. In chorioepithelioma there may be as much as 100,000 mouse units per liter of urine. The incidence of testicular neoplasms was seen in 100 cases out of 27,000 admissions in an Army General Hospital. It occurs more frequently between the ages of 20 and 40 years.

Metastatic lesions from testicular neoplasms travel by way of the lymphatics, except in chorioma, as mentioned, which extends by way of the blood stream. The extension occurs along the inguinal canal to the pelvis, lumbar region and to the nodes in the celiac region. From the epigastric nodes they extend to the mediastinum and the supraclavicular nodes. Choriomas more frequently invade the liver, lungs and brain.

The treatment of testicular tumors is a subject of varied opinions. The early diagnosis will in most cases affect the prognosis and successful treatment. All cases should have an orchiectomy as early as possible. The inguinal approach seems more rational since the cord can be severed at the internal inguinal ring which interrupts the blood and lymph channel at that point. In the case of seminoma radiation of the retroperitoneal glands certainly should be done. Hinman advises immediate orchiectomy followed by radiation and, in some cases, a radical dissection of the retroperitoneal glands. Lewis feels radical dissection of the retroperitoneal glands in any type of case, seminoma, embryonal carcinoma and teratocarcinoma, if metastatic lesions have occurred in that area, should be done. The radical dissection of glands is rather controversial. If the nodes below the diaphragm were the only sites of metastatic lesions, such an operation would seem quite justifiable. Frequently, however, the supraclavicular nodes are the first to become involved. The procedure is quite formidable but Lewis states that he has had no operative mortality in 169 cases.

If the prolan urine excretion is present or high and no evidence of metastases has oc-

curred, orchiectomy followed by radiation will give good results. The effectiveness can usually be measured by the prolan excretion. A decrease is a good prognostic sign. Lewis feels that the long internal spermatic veins should be resected in cases of chorioepitheliomas. The adult type teratomas are radioresistant and, in the case of metastatic nodes, a more radical procedure would seem indicated. The same plan of therapy will apply in radioresistant metastatic nodes from embryonal carcinoma and teratocarcinoma where the prolan level remains high or static.

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# THE PALLIATIVE EFFECT OF ANDROGENS IN THE MANAGEMENT OF PELVIC MALIGNANCIES.

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and
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*Augusta*

## *Introduction*

The hormonal therapy of neoplastic disease offers an additional approach in the management of malignancies of structures which are under the influence of the glands of internal secretion. Ever since the investigations of Huggins and his associates[1] in 1941, estrogens have been effectively employed in prostatic cancer. Although the merits of this form of treatment are well established, its limitations are also generally appreciated. In recent years the hormonal approach in the treatment of breast cancer has come under extensive study[2-6]. The recent report of Adair is promising[7-8]. Estrogens have been used for the arrest of advanced breast malignancies in women well beyond the menopause by English investigators since 1942 and more recently in this country[10-11].

The purpose of this paper is to draw attention to the palliative effect of androgens in women with advanced pelvic malignancies. The series comprises 5 cases and the growths occurred in women of the following ages: 43, 48, 53, 56, and 80. The diagnosis was established in three instances as primary ovarian carcinoma, in a fourth as metastatic breast carcinoma to the ovaries, and in the fifth as uterine sarcoma. In each instance metastases were extensive. Histopathologic sections were obtained in all cases.

### *REPORTS OF CASES*

*Case 1:* This patient, R. F., a white female aged 43, was first seen on November 1, 1943, when she presented herself because of a lump which had been existent in her right breast for a period of over a year, during which time she had done nothing about it with the hopes that it might leave. A slight discharge had existed from the nipple during the previous two months. Examination showed an indurated cancer in the outer upper quadrant of the right breast with marked nipple retraction, and with a secondary area of retraction in the line of the pectoral muscles three centimeters above the nipple.

She was sent to the University Hospital and on November 4, 1943, a radical Rodman amputation of the right breast was performed. Her recovery following this operative procedure was excellent and the wound area was entirely healed by January 22, 1944 (Fig. 1).

She was seen at intervals and examinations showed no evidence of recurrence of the cancer in her breast or in her lungs. On December 7, 1945, she returned, stating that her periods had been normal until November 1, 1945, but that between that date and November 9 she had twice a day gushing vaginal flows of blood accompanied by clots and that between the gushes she would be relatively clear. Again on November 19 and 20 she had a moderate stain. From Novmeber 27 until she was examined on December 7 she passed constantly large and small clots. At this examination the cervix was entirely clear, but the fundus showed multiple nodulated and pedunculated fibroids which exended well up on the right side. She was given several injections of progesterone and her irregular bleeding ceased. She was advised at that time to have the pelvic tumor removed. On June 1, 1946, she returned and stated that her menses had been regular throughout the previous six months, that February and April were very heavy, but the other months were scanty. Examination revealed that her breasts were entirely clear and that what appeared to be the fibroid was now enlarging and extending above the navel on the right. She was again advised to have the tumor removed as early as possible. Finally we were able to arrange for her to enter the hospital and the operation was performed on August 19. At that operation, under cyclopropane anesthesia, the abdomen was opened, marked ascites being en-

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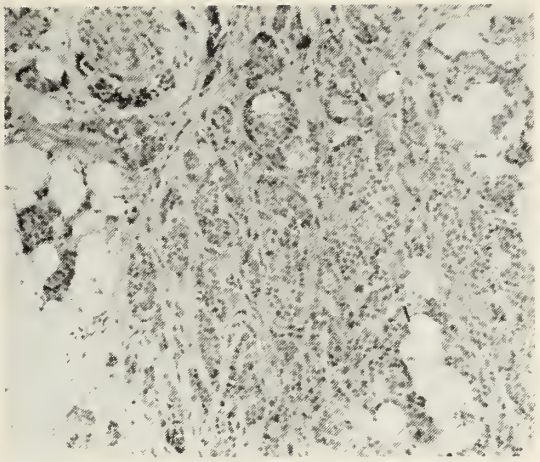


Figure 1
Histologic section of metastatic node removed from axilla (Case 1).

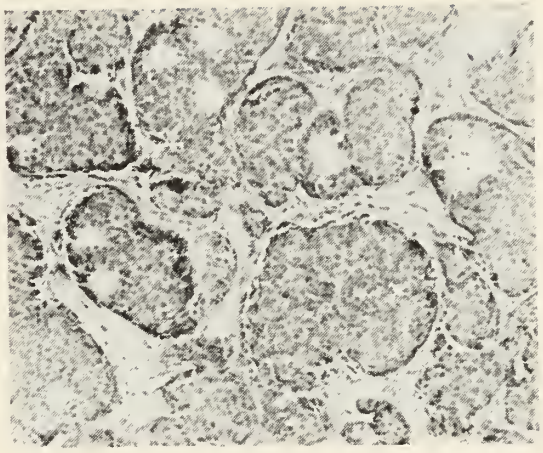


Figure 2
Histologic section of tissue obtained from omentum (Case 1).

countered. The omentum was rolled into a knot with metastatic tissue over the bladder area. The pelvis was filled by two large serous cysts and multiple nodules were apparently springing from both ovaries in addition to the large multiple fiborids which involved the uterus. The liver was generally infiltrated with metastatic nodules varying from one to ten centimeters in diameter. The omentum and mesenteric leaves were filled with shotty nodules. The fluid was evacuated, the cysts evacuated and the abdomen closed anatomically. Immediately subsequent to the operation androgen therapy was started by one of us (R. B. G.), eight pellets of 75 milligrams each of testosterone being implanted, the therapy being continued regularly thereafter. She returned to her work as a secretary two weeks following the operation. In April 1947 her general condition was essentially normal and pelvic examination showed that both the fibroids and cystic tumor masses were smaller, reaching only half way to the navel, and a few glands were palpable along the rectal shelf. We made the notation in her record "that the results of testosterone therapy were unbelievable if it had not been seen." She went to Miami in July 1947 and developed a severe sunburn, following which marked edema appeared in her ankles. Examination following her return showed a full symmetrical abdomen with a marked fluid wave. She showed pitting edema of her ankles and legs. She was advised to have the fluid removed from her abdomen by exploration rather than by paracentesis. On August 20, under cyclopropane anesthesia, through a left Moynihan incision, the adhesions to the anterior abdominal wall under the previous incision were separated revealing that the ovarian tumors were still bilateral, but were less than one-third the size of the previous year and the larger metastatic area in the liver was only one-half its former size and was now flat on the surface and not bulging as formerly. The gallbladder was not distended. Two nodules were taken from the omentum, 12 quarts of fluid were evacuated, and the abdomen was closed anatomically. Subsequent to the operation her condition remained good until the evening of August 22, when she passed into coma. She died on August 26, the immediate cause of death apparently being circulatory failure.

Histopathologic report of the sections removed at laparotomy, on August 20, revealed two small sections of adipose tissue in part glandular and in part solid resembling breast carcinoma similar to that seen in the axillary nodes removed in 1943 (Fig. 2). From August 26, 1946 to July 3, 1947, 18 pellets of testosterone (1350 mg.) were implanted, and 850 mg. of testosterone propionate were injected in doses of 25 mg. at more or less weekly intervals, or a total of 2200 mg. of testosterone in 10 months. Her vaginal smear at the start of therapy revealed two plus desquamation, abundant polymorphs, some basal, intermediate and cornified cells, which could be interpreted as a moderately poor estrongenic smear (Fig 3). Within a few weeks the smear became castrate, showing only basal cells thereafter (Fig 4). Menstruation ceased completely after the commencement of testosterone therapy. Her weight on September 8, 1946 was 94 pounds. This rapidly increased and she stabilized at a weight varying from 114 to 116 pounds, a gain of some 20 to 22 pounds, which was her normal weight. The andromimetic phenomena were moderate. The clitoris enlarged considerably, the voice became husky, and there was some increase in hair growth on the face and extremities. Her appetite, well-being and stamina improved markedly. There was a moderate increase in libido, and the morale of the patient improved to such an extent that she felt she would get well.

*Case 2:* H. P. C., a white widow, aged 80, was first seen March 24, 1947, having been referred by Dr. Leopold Schneider of Ninety Six, S. C., because of abdominal cramps and frequent stools. Her history was that in October 1946 suddenly one morning she had a severe, labor-like cramp in the lower abdomen which was followed by a desire to defecate and thereafter she had recurring cramp with frequent stools not associated with any blood or mucus. She took paregoric and the cramps would abate for two or three days and then return. She was given various drugs, without producing relief, and in February 1947 she entered the Greenwood Hospital where she remained several days, during which time a barium enema study, which was retained with difficulty, was reported to be normal. She was dismissed from the hospital with a negative diagnosis, but continued to have a constant desire to defecate associated with cramps and stools that numbered as high as 15 in each 24 hours. During this same period she had marked frequency of urine, six to seven times each day.

Examination showed an elderly, wizened female, with dried skin and emaciated subcutaneous tissue. Her ears, eyes, nose, throat and sinuses were negative. The heart and lungs seemed to be normal for her age. The blood pressure readings were 132/84, and her pulse rate was 78. Abdominal examination showed a general gassy distention, and below the navel a firm, nodular tumor was palpable which apparently rose out of the pelvis. The pelvic examination showed the

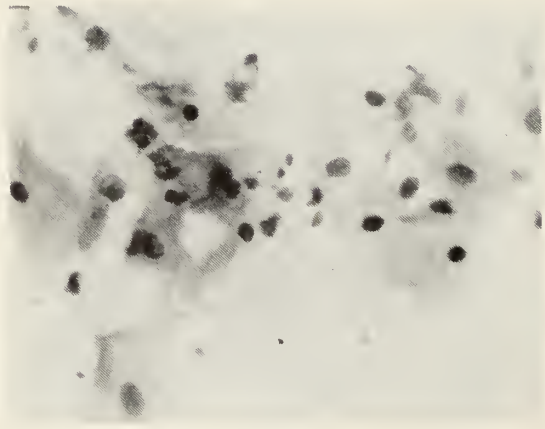


Figure 3
Vaginal smear at start of estrogen therapy (Case 1)

vagina completely filled by an extruding, degenerating tumor which appeared to be a fibroid and which was distinctly connected with the tumor which could be felt above the pubis. Operative therapy was advised and in the interval before she could be admitted to the University Hospital on April 19, she had a rather sudden gushing hemorrhage from her vagina and was given transfusions at the Greenwood Hospital. The preoperative examination showed that the mass which had previously blocked her vagina and bulged into the rectum had practically subsided and that a serosanginous discharge came from a pocket behind the cervix. Under anesthesia this pocket was found to be some 10 cm. in diameter and extended behind the cervix and right broad ligament. A midline incision was made, evacuating a large quantity of serous fluid. A multilocular papillary cystic adenocarcinoma of the right ovary forming a huge pelvic mass on the right was removed. Metastatic nodules from the omentum were removed along with the growth from the right pelvis. The removal of the right ovarian mass was not considered to be curative but we had the feeling that if a large amount of the malignant tissue could be removed that our possibility of good success with testosterone therapy might be improved. The pathologic report showed a seroanaplastic carcinoma of the ovary. The main newgrowth was solid, but there was some gland formation and papillary growth.

Before the patient was dismissed from the hospital one of us (R. B. G.) gave her 600 mg. of of testosterone (8 pellets) five days postoperative and 300 mg. (4 pellets) six days later. On June 30, in spite of having two slight vaginal hemorrhages after her return home, she had gained 20 pounds in weight, looked excellent and felt extremely well. The abdomen at this time was soft but a portion of the hard mass was present on the right side on bimanual examination and the pelvorectal tumor was less than half of its former size and now felt very firm. She was given 300 mg. of testosterone (4 pellets) by implantation. Her condition seemed so good that it was decided to allow her to wait until September for further testosterone therapy.

On August 26, because a moderate amount of drainage from her vagina had again occurred, once with a gush of serum and blood, she came back even though she did not feel ill but was developing mental distress in regard to her condition. Examination showed a marked recurrence of the tumor formation into the pelvis and vaginal area so that the general mass was again as large as at the primary observation. Her physician was advised to give her 25 mg. of testosterone every second day until she could come back for pellet implantation. Her condition never permitted her return but under this amount of testosterone she continued

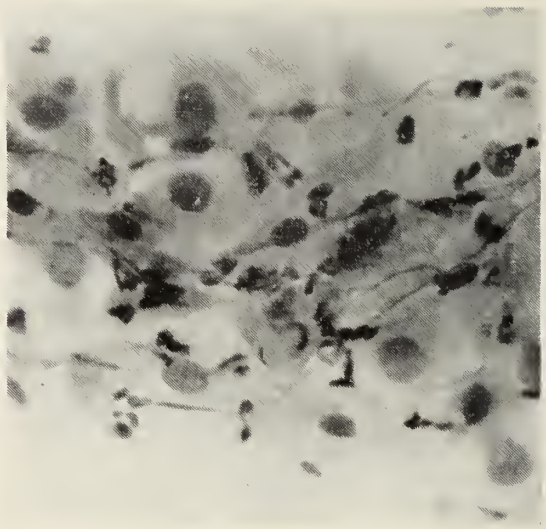


Figure 4
Vaginal smear a few weeks after estrogen therapy was begun (Case 1).

on an up and downhill course all of the fall of 1947 and death finally ensued on December 14, 17 months from the onset of her symptoms.

*Comment (R. B. G.):* This elderly lady when seen postoperatively, was weak and debilitated. There was marked increase in strength following pellet implantation on April 26, and convalescence was hastened. A total of 16 pellets of testosterone (1200 mg.) was implanted from April 26 to May 30. During this period she gained 20 pounds in weight, felt extremely well when her age and condition were considered. Signs of masculinization were not evident, but she volunteered the information that libido had increased. No testosterone was given from May to the end of August 1947. From September to the time of her death in December she received many injections of 25 mg. of testosterone propionate.

*Case 3:* A 56 year old white female had a semisolid and cystic carcinoma of the right ovary, diagnosed histopathologically as endosalpingo-carcinoma, incompletely removed because of extension to the broad ligament in April 1947. Deep x-ray therapy had been administered. On July 8, 1947, the patient was referred to one of us (R. B. G.) by Dr. G. L. Klemann and 12 pellets (900 mg.) were implanted. In addition, the patient was given methyl testosterone, 10 mg. daily for 60 days. She was seen in September and showed marked improvement in her well-being and her morale was very good. According to her statements she felt 20 years younger, was very much stronger and had gained 15 pounds. Examination revealed a decrease in the size of the pelvic mass. Her voice was slightly hoarse. Some acne was present on her forehead and breasts and she admitted to some increase in libido. Methyl testosterone 10 mg. twice daily was ordered to be continued for several months. The patient made sufficient improvement so that in December her physician had her readmitted to the hospital for further surgery in the belief that the tumor had localized and could be wholly removed. At exploratory operation the situation was hopeless and no further surgery was attempted. The patient went steadily downhill thereafter and in spite of additional testosterone therapy in the form of injections, died in February 1948.

*Case 4:* M. K., a white female, aged 48, was first seen on June 3, 1946, giving a history of having had an operation for uterine fibroids several years previously. In this interval she had been reoperated on three times for recurrence of the so-called fibroid tumors. Histo-

pathologic report revealed recurrent leiomyosarcoma. She had had several courses of x-ray therapy but the tumors proved to be x-ray resistant. At the time of first examination she manifested a recurrence of pelvic discomfort, loss of appetite, and a general decline in health. No tumor mass was palpable, but the examination was very unsatisfactory because of the degree of pelvic tenderness. Her weight was 119 pounds. Nine hundred mg. of testosterone (12 pellets) were implanted and she returned on June 16 for follow-up examination. There was marked hoarseness of the voice, the clitoris was enlarged and sensitive and her libido had increased considerably. No hypertrichosis was evident. The hot flashes which she had experienced prior to implantation had disappeared. She had gained 11 pounds in weight and felt much stronger, slept well and maintained a good appetite. She was seen a month later and a tumor mass was palpable in the pelvis and there was recurrence of pain and discomfort. She returned on September 5. The tumor was growing rapidly and now extended to the umbilicus. There was much rectal pressure. Since it was felt that testosterone had had no effect on the growth of this tumor, and her surgeon, Dr. Roger Doughty of Columbia, S. C., felt that it was useless to again explore, the patient was given massive dosage of estrogens and another course of deep x-ray therapy. No response to this therapy was noted and her decline continued until several months later, when Dr. Doughty reported her death.

*Case 5:* A. M., a white female, aged 53, was referred by Dr. W. D. Jennnings to one of us (R. B. G.) because of a large abdominal mass. She was first seen on May 27, 1947, complaining of pelvic pain, abdominal swelling and respiratory distress. Examination revealed several large abdominal masses arising from the pelvis and extending to the level of the umbilicus. The impression was uterine myoma with ovarian cystadenoma. Because of the patient's poor condition as well as severe menopausal symptoms, 225 mg. (3 pellets) of testosterone were implanted in an effort to alleviate the syndrome and reduce the size of the masses in order to facilitate surgery. During the next four months the patient showed marked improvement. Her symptoms were ameliorated and the masses were definitely smaller. On October 1 laparotomy was performed and a pseudomucin cystadenocarcinoma involving both ovaries was found. The growths had ruptured through the ovarian capsule and were seeded throughout the pelvic cavity. There was extension into the broad ligaments. The masses were extirpated but the pelvic sac was extensively involved and the removal was considered incomplete. The patient was given a series of deep x-ray therapy (4000 r. units). Marked edema of the left leg occurred and it was feared that there was extension of metastases to the deep veins. On November 9 225 mg. (3 pellets) of testosterone were implanted. She was seen again on January 8, 1948, and marked improvement in her general condition was noted. Her menopausal symptoms were well controlled. She felt well and was gaining in weight. At this time 225 mg. (3 pellets) of testosterone were implanted. When last seen on February 26 her condition was very satisfactory.

## *Discussion*

The improvement in the general health of the patients in this small series may be attributed to the metabolic effects of testosterone. Proof of a direct effect on the cancerous tissue is lacking, although it appeared that in several of the patients there was a diminution in the size of the original tumors and the metastatic nodules. The dosages employed were purely empiric and it appears now that a much larger dosage may have been used to greater benefit. The fear of excessive masculinization was not warranted. The mild to moderate hirsutism, the harshness of the voice, the enlargement of the clitoris and the minor degree of acne, however, should be of minor nuisance value when weighed against the positive comforts. The alleviation of menopausal symptoms, the alleviation of pelvic discomfort, the lessening of the need for narcotics to assuage pain or for barbiturates to induce sleep, are some of the positive values. The improvement in well-being, the gain in weight, the improved morale of the patients all were encouraging features. It is true that the benefits lasted from several months to almost one year in these cases, but they were all hopeless, and if androgens so administered offer them surcease from suffering the trial was worth the effort. Pellet implantation offered a more convenient method of administration of testosterone than repeated injections at frequent intervals. Pellets were implanted by means of the Kearns trocar and canula. The site chosen for implantation was just mesial to the inguinal region of the abdominal wall. The area of insertion of the canula was procainized and implantation accomplished with a minimum of time and with no discomfort to the patient (Figs. 5, 6, and 7). The optimum dosage has not yet been decided upon but it is evident, from our preliminary studies, that greater dosage for greater periods of time may offer much more.

A review of the literature reveals that Beecham[12] reported in 1943 six cases of ovarian carcinoma treated with androgens. Rapid relief of pain in most cases and improvement in the patient's general condition, as evidenced by gain in weight, were noted. The dosages employed in his series varied from a minimum of 250 mg., to a maximum of 1310 mg. None of his cases



Figure 5
For pellet implantation, the site chosen was just mesial to the inguinal region of the abdominal wall. After surgical preparation, a small area was procainized.



Figure 6
Trocar and canula in place for pellet implantation.

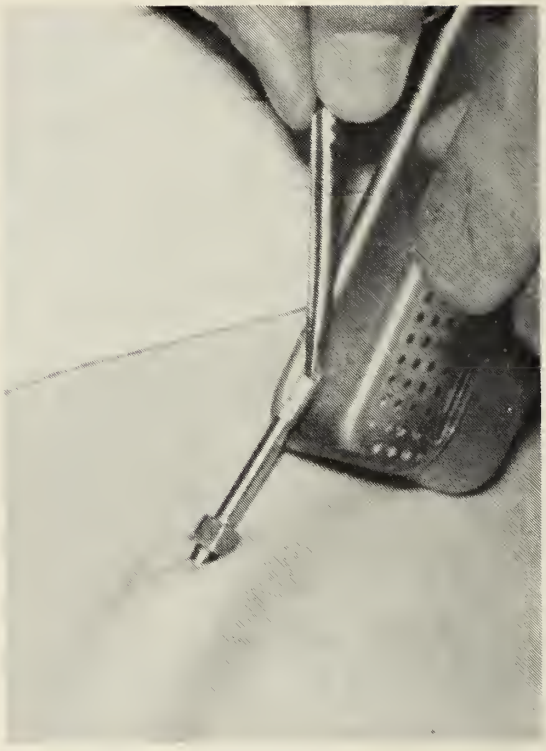


Figure 7
Note pellets in place for final step in the simple operation for implantation.

demonstrated evidence of reduction in size of the neoplasms. Wyatt[13] in 1945 reported on the effect of testosterone propionate on two cases of ovarian carcinoma, noting an immediate though temporary effect of well-being in the two patients, without evidence, however, of regression in the size of the growth or metastatic deposits either clinically or histologically. The dosage used was 3150 mg. in the first patient and 7200 mg. in the second. Abel[14] in 1945 in his report on five cases of progressive malignancies of the female genitalia treated with androgens found that well-being, morale, menopausal symptoms, and libido, all were improved. He used large doses, 100 to 150 mg. of testosterone per week for 10 months. There was nothing to indicate any regression or even retardation of the malignant processes. Masculinizing symptoms appeared in all his patients.

## *Conclusions*

Androgen therapy in the form of pellet

implantation or intramuscular injection proved of value as a palliative measure in the management of pelvic malignancies. The improvements noted were both physical and psychological. There was temporary remission of pelvic pain, some decrease in the size of the tumor masses, improvement in well-being, increase in weight (9 to 20 pounds) and a lessened need for narcotics and sedatives. Physiologic effects, such as cessation of menstruation, hypertrichosis, deepening of the voice, increase in libido, enlargement of the clitoris, and atrophic changes in the vaginal smear were usually noted.


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Note: Discussion of the foregoing papers will be published in a subsequent number of *The Journal*.—Ed.

## WARTIME INSECTICIDE CURES SCABIES

Gammexane, an insecticide discovered in England during World War II, is highly effective against scabies, commonly called the "itch," says two New York physicians.

Writing in the October 23 issue of *The Journal of the American Medical Association*, the physicians—A. Benson Cannon and Marvin E. McRae of the Department of Dermatology, College of Physicians and Surgeons, Columbia University, and the Vanderbilt Clinic—report that in a test of gammexane on 100 patients with scabies, all were cured by one to three treatments with a preparation of the drug in vanishing cream.

In nearly two thirds of the group, the disease "showed no signs of activity" after a single application of the cream. Gammexane was effective in cases of scabies which had resisted other treatment.

The cream is virtually nontoxic and nonirritating to patients and has a faint, not unpleasant, odor, the physicians point out.

Gammexane has been extensively tested by the Department of Agriculture, the Army Service Forces, and the Kettering Institute, and is important in controlling chiggers, lice, ticks, fleas, cockroaches, bedbugs, and mites, according to the article.

Gammexane has been known as "'666," a name which was undesirable because it had already been used for a commercial antimalarial preparation, the physicians say.

## TOXIC HYPERPLASIA OF THE PROSTATE


Earl Floyd, M.D.
and
J. L. Pittman, M.D.
*Atlanta*


Very few men escape having at some time in their lives an affection of the prostate gland. If during adolescence and middle age we escape infection of this organ, which you know is quite common, and toxic hyperplasia, we are still faced with that respectable man's disease after 50, hypertrophy and, if not that and we live long enough, cancer. One who lives to a ripe old age and escapes without having any of these would be conspicuous by his singularity, for we doubt if there is another organ in the male that is involved in more pathologic processes throughout life than is the prostate gland. This article pertains to one of these affections.

Toxic hyperplasia of the prostate has been described as an increased amount of secretion from the prostate and the toxic effects produced by the absorption of this excessive secretion on the individual.

It is not an infection. No organisms are found in the secretion as a rule, and, as a matter of fact, there are few if any pus cells, just an overabundance of apparently normal prostatic secretion which when absorbed causes general systemic and localized symptoms.

According to Grayson Carroll[1] the daily secretion of prostatic fluid ranges from 0.5 to 2 cc. This is liberated into the urine during the 24-hour period. In these individuals with so-called toxic hyperplasia of the prostate an enormous amount of secretion accumulates in the prostate and seminal vesicles. The amount of the expressed secretion after massage ordinarily is 2 to 3 cc., whereas in these individuals with toxic

hyperplasia there is expressed as much as 10 to 12, and even 15 cc.

We have observed, and we think this true with most urologists, that the adroitly emptying of the prostate and the seminal vesicles in a regular systematic manner relieves many patients of their symptoms, such as pain in the back, sensations of pressure in the perineum, aching in the lower limbs, listlessness, nervousness, and things of that kind. Many, of course, have considerable pus in the prostatic secretion and there is definitely an infectious prostatitis. Some are sexual neurotics, but others are not psychosomatics and their secretions are free of infection and pus, with the exception of an occasional leukocyte, and we feel sure that these were cases of toxic hyperplasia of the prostate. The glands felt boggy, a little enlarged, with a very copious amount of secretion, and the benefit they immediately obtained from treatment left no doubt in our minds about this.

Subsequent massage in some of these cases may disclose pus cells in varying amounts in the secretion and, should their symptoms be relieved, one might be led to believe that "sealed off" pockets were responsible for the symptoms. We are more inclined to feel, however, that the pus cells found on the second or third examinations in some of these cases are a result of trauma produced by the treatment and not the opening of the pockets that "sealed off" the infection.

Scientific proof of the toxic effect of these large amounts of secretions upon the individual is based on work done separately by Barnes,[2] Huggins,[3] and Eular[4]. Their work is not complete but they have shown definitely that these secretions are toxic to the system.

Dr. Barnes produced experimental evidence of the toxicity of prostatic secretion. In a personal communication to one of us he stated that his lack of knowledge of biochemistry prevented him from fractionating prostatic fluids and determining just which constituents were toxic. He used the entire sterile pus free prostatic secretion, not having isolated any particular substance. His experiments were upon animals. Mice were injected intraperitoneally with varying amounts of the prostatic secretion, using 0.5 to 2 cc. Toxicity was measured by observation of the activity of the mouse after injection and by measurement with the activity scale. He found that the larger the dose the more toxic the animal became. Death occurred in many cases and others were quite sick. Autopsy revealed acute congestion of all internal organs and no other pathologic changes. There was no evidence of infection in any of the mice.

In order to compare the toxicity of prostatic secretion with other substances of known toxicity a series of rats were injected at different times with 1 cc. of prostatic secretion, 0.5 cc. of 1:1,000 solution of histamine, ¼ grain of morphine, 3 cc. of sterile milk, and 10 cc. of egg albumin, also varying amounts of urine. Temperature, leukocyte count, and general activity of the animal were noted. He concluded that the toxicity of 1 cc. of prostatic secretion was comparable to ¼ grain of morphine or 0.5 cc. of 1:1,000 histamine. The egg albumin and milk and comparatively large quantities of this urine were non-toxic when injected into the peritonal cavity.

Dr. Huggins made similar observations on prostatic secretions. He found that the intravenous injection of prostatic fluid is always followed by rapid fall in blood pressure. Prostatic extract of dogs, when injected into rabbits, caused a pressor effect followed by a marked lowering of blood pressure, intravascular clotting, and death.

Eular found that the extract of the prostate when injected into the animal produced

vasodepressor effects and materially lowered the blood pressure. So from these studies and from our clinical observation, we are led to believe that an excessive amount of prostatic secretion retained in the prostate results in absorption with toxic symptoms.

Now, what about this excessive amount of secretion on the prostate itself? Could it not be responsible for some cases of recalcitrant prostatitis? Youmans[5] thinks not. His observation has been that prostatic fluid exhibits bactericidal activity against such organisms as the colon bacillus, streptococcus and the staphylococcus. He feels that infection of the prostate gland would be more common if this bactericidal activity were not present. It seems logical to us to assume, though, that when this state of congestion continues for any great length of time, the resistance of the prostate to infection is bound to be lowered to such extent that at least a low grade infection may develop.

Is it a factor in prostatic hypertrophy? Well, this is not yet known but it has been observed by many urologists, those who have practiced urology over a long period of time, that very, very few men who have been receiving systematic massages for a condition like that of toxic hyperplasia ever develop hypertrophy, or at least never develop sufficient obstruction to require operation. However, it lacks scientific study. Most scientific work along this line tends to show that the androgens are the elements in the etiology of hypertrophy, even though there is a decreased amount secreted in old age, just when hypertrophy is likely to occur.

Since some of these patients feel so much better immediately after emptying their prostate and seminal vesicles of large amounts of secretion, could it be that the prostate has another function, probably one of endocrinologic nature? Dr. Huggins thinks not. He states that the evidence is unconvincing. At any rate it is a notable fact that many of them go out of the office, following treatment, feeling much better immediately. Should this particular phenomenon be due to a poison, would the patient be so promptly relieved?

There are a great many things about the problem that still remain unanswered. It remains to someone in the future, who, with a knowledge of biochemistry, can not only fractionate these secretions but determine which is toxic to the system and the effect on the gland itself.

Most of us spend our entire time trying to correct these conditions after they have developed. Let us hope that someone interested in urology will spend more time for instance in the prevention of hypertrophy rather than trying to correct it after it has once developed.


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## ATTENTION, ALL MEMBERS!

The annual directory of the Medical Association of Georgia will be published in the December *Journal*. If your name has not been reported by your county secretary, please ask him to do so at once.

The American Medical Association is now compiling the records of all doctors of medicine in the United States, for use in its directory, which will be published early next year. Monthly reports to the A.M.A. are made by the Medical Association of Georgia, and other state medical associations as well.

Remember, no physician may be a member of organized medicine without first qualifying for membership in his or her county medical society. Look for your 1948 membership card now. If you do not find it, then be sure you have one before the end of this year.

## SAVANNAH SESSION, 1949

The next annual session of the Medical Association of Georgia will be held at the Hotel DeSoto, May 10-13, 1949. This will be the 100th anniversary meeting of the Association, and the attendance will certainly be large.

Hotel facilities in Savannah are limited. It is important, therefore, that all persons whose plans include this meeting obtain hotel reservations at once.

# CANCER COMMISSION, MEDICAL ASSOCIATION OF GEORGIA

## CANCER NEWS

*Some Facts to Think Seriously About*

Less than 28,000 of our people died last year from old age. In 1946, 16,000 or more died from suicide, a deliberate, self-willed tragedy. Of 1,395,617 deaths in 1946 there were 908,230 who were killed by heart disease, cancer and conditions related to childbirth. The first killer took away 588,151 people in 1946, and some 60,000,000 of us now alive will probably die from heart disease and those other killers mentioned above.

Killer No. 2—cancer—in 1946 was responsible for one out of eight deaths (182,005), and of those now living 18,000,000 will succumb to malignancies.

Childbirth and related causes produced one out of ten deaths in 1945, a total loss of 137,774 mothers and babies.

Any one reading the above facts certainly must realize their paramount importance to our public health and general economy. Indeed, you who now read this column are tentative victims of cancer or its allied conditions, and if not cancer, then there would appear little chance, at the present writing, for any one to escape either cancer or heart disease. Therefore, to quote a famous magazine, "We are dying from dumbness", and the statement is predicated on the fact that we are doing very little about the matter.

The facts are these: In 1946 we spent $2,339,500 for heart disease and of this amount only $815,000 came from private sources; for cancer we gave $3,810,000; and for childhood killers we appropriated from public and private funds about $300,000. All totaled the public gave approximately $6,449,000 or about *four cents* per person in order to help control diseases far more dangerous than our greatest enemies.

To continue the argument: In 1945 the American people spent $40,000,000 on college football; in 1946 they gambled $1,616,340,795 in two racing states; and in 1945 $50,000,000 on household pets, and to top it off, in 1947 allotted $2,000,000,000 for cosmetics.

In 1946 we should not forget, however, that the public and the government spent $19,018,500 on research in attempting to help unravel the medical mysteries of the three great killers. This amount represents a fine step forward, but there is much yet to be done, and we of the professions, and the public as well, must take a greater amount of responsibility in doing our share.

To sum up: We must become active to a greater extent in research and preventative medicine, and enlarge and improve our clinical and surgical facilities so that they are absolutely equal to the task before us or else, as our noted magazine, "Vogue", April 1, 1948, has so aptly said: "Continue dying of dumbness".

JACK C. NORRIS, M.D., *Chairman,*
*Cancer Commission, Medical Assn. of Georgia.*

# PRESIDENT'S PAGE

## A CENTURY OF PROGRESS

In Georgia's long and honorable medical history, next year ushers in a most memorable event. It was one hundred years ago that the Medical Association of Georgia was born, and so next May, in Savannah, we will honor the founders and will depict their achievements through those formative years.

In 1804 the Georgia Medical Society of Savannah was organized. Eighteen years later the Medical Society of Augusta was incorporated. With a desire to serve and a vision for the future health of all the people of Georgia, these pioneer physicians decided to develop an organization for the entire State. In 1849, in Macon, the organization meeting of the Medical Association of Georgia was convened, and since that distant year the progress in medicine, surgery and public health has been definite and praiseworthy.

It is altogether right and proper that a great celebration should take place in Savannah, where our Association meets in 1949. At that time we shall honor those of our profession who originated the organization; we shall honor their successors, who have developed and advanced it, and we shall renew our pledge of affection to their memory and our faith in God who guided them in their endeavor. This same Holy Guidance, we beg, in our desire to carry on into the next century, an ever-increasing ambition to improve the health and well-being of the people in our great commonwealth.

On September 22, 1948 the Council of the Medical Association of Georgia met in Atlanta and unanimously decided that the meeting of the Association, May 10-13, 1949, in Savannah, should be a centennial celebration with a program and entertainment befitting the occasion.

Council also authorized the inauguration, at the centennial session, of an organization to be known as the "Fifty Year Club." All members of our Association who graduated fifty or more years ago will be honored at the Savannah meeting. Each one will be presented with a certificate of distinction and also a gold lapel badge of the Medical Association of Georgia with the numerals "50" superimposed. This feature alone should be one of the most outstanding events of the convention, but, in addition, we shall have the pleasure of hearing many of the best scientific papers and a number of the finest speeches ever prepared for a medical meeting in the South. Many scientific and technical exhibitors are enthusiastic over the coming event and freely express their desire to assist in making it a great success.

The Woman's Auxiliary, I am told, will arrange a most interesting and entertaining program, designed to harmonize with the general plan of this special occasion.

Hotel space will be limited and, as a large attendance is anticipated, members should make reservations promptly.

The next similar meeting of the Medical Association of Georgia will be in the year 2049. Let's give the members of that far away convention something to shoot at. *Next year is our only opportunity to do it.*

*You can't afford to miss the Centennial Celebration in Savannah!*

Edgar H. Greene, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

NOVEMBER, 1948

## EDITORIALS

Good editorials are difficult to write, for the reason one must first have something to write about. Then he or she must leave out of the editorial personal pronouns. Customary, also, is that one's opinion should be supported by evidence from other sources.

This *Journal* has always been receptive to good editorials, particularly from the young group of members. This month we are indeed fortunate to have two editorials by beginners in practice, both of whom have been highly trained in their respective fields of surgery—namely, Drs. John H. Ridley and James H. Semans, both of Atlanta.

Other editorials will be welcomed. To be most effective, they should not exceed 600 words. All should be typewritten and double-spaced, and signed by the author.

## FOR FEWER DEATHS BY CARCINOMA OF THE CERVIX

The information available now about cancer is increasing geometrically as research is intensified, and accepted modes of treatment are made more accessible. But without coordination of research and proper interpretation of the current findings to the medical profession as a whole, this wealth of new knowledge suffers great loss in practicality.

When this current knowledge is analyzed, one is most impressed not by the progress that has been made in finding the cause or cure of cancer or providing care for cancer patients, but by the failure for us to keep apace in this field with the progress in other great fields of medicine. But our shortcomings are not due to lack of effort or lack of application of all available means of research and therapy, because at present the greatest concerted effort is being made to educate the public about cancer, to obtain funds and facilities for further research, to provide therapy, and to provide care of the terminal and hopeless cases. The latter is most neglected.

When the average practitioner is confronted by the deluge of facts and figures resulting from worldwide research and therapy, he finds the results and opinions are too often contradictory, inconclusive and confusing. Therefore, he must go ahead with what conclusions he may draw for himself, but feeling oftimes that he is not bringing to his patient the best and most modern manner of treatment and disposition of cancer.

During the past year here in Georgia several regional symposiums have been sponsored by conjunct effort of the Cancer Commission of the Georgia Department of Public Health, the American Cancer Society and the regional medical groups. The interest thus created and benefits derived have been encouraging and every effort is being made to perpetuate such meetings for the future. In addition, interest has been shown for the creation of an Annual Symposium of Cancer for the whole State of Georgia, at which the profession might be enlightened on the current progress of cancer research, cancer therapy and care of terminal patients. Such a symposium could winnow the voluminous information about cancer and pass it on to the practicing physicians and surgeons in a comprehensible manner suitable for practical application.

In the case of cancer of the cervix, which is one of two commonest malignancies to kill women—the other being cancer of the breast—the disease may be eradicated and possibly prevented, depending on its early detection and appropriate treatment. Cancer of the cervix may grow rapidly to the incurable stage before making its presence known unless periodic examinations are made, and people are made to know the few hints of its early presence. Because cancer of the cervix is so infrequently seen by the gynecologist during the early and curable stages, a determined effort at education of women as to the signs of early cancer is, at present, our most valuable weapon against the disease. And, by the same token, it is most important to remind again and again the medical profession about the prevalence and viciousness of the disease. Too often to the gynecologist is referred a woman in the advanced stages of carcinoma of the cervix, finally diagnosed by the cardinal signs of generalized carcinomatosis but up until that time having received only various empirical remedies such as iron, oxytocics, hormones, etc., and *never* having had a vaginal examination. To diagnose early cancer of the cervix one must suspect it at all times, particularly in parous women at any age. An old expression, which is applicable here, has come down through the years, "A doctor must have cancer on the brain to diagnose cancer."

It is true that the efforts at education of the public are being doubled and redoubled, but there are always great problems encountered. There are large masses of people not accessible by either literature or radio and difficult to

reach by lectures. Here again efforts are balked by ancient taboos about mention of the word "cancer", and particularly about any discussion of cancer or any disease of the reproductive system. These people are usually in the poorly educated and low economic group, which present the most unfortunate problems in therapy and terminal care.

In face of these difficulties which are gradually but slowly being overcome by increasingly efficient anticancer organizations, a heavy responsibility is still to be borne by the medical profession as a whole, in making the people in their localities more conscious, without being terrorized, of cancer.

The reason that the word "terrorized" is used is because the education of the public, particularly women, about the signs, symptoms and dangers of cancer may act as a two-edged sword. On the one side a great benefit can be derived as has been discussed above, but on the other edge, many people develop a cancerphobia which can be so marked as to put the patient in as serious an emotional state as if there were a realization of the actual disease. The task of alleviating a person's fears by patient explanation and reassurance usually falls to the lot of the doctor.

Now, more specifically, early carcinoma of the cervix, even carcinoma *in situ*, is being found with increasing frequency as the effect of the intensified education of both the public and the medical profession is felt. It is well known that cancer in this location, if detected early, can be completely eradicated by radical extirpation or by improved technic of irradiation therapy. However, if the weapon of the early diagnosis is lost on account of delay by ignorance or prudishness, cancer of the cervix rapidly becomes practically an irremediable condition against which we have no more effective means of therapy than did our forebears in the much earlier days of x-ray and radium.

The effectiveness of both irradiation and surgical attack have been thoroughly evaluated by the results in thousands and thousands of cases, thoroughly treated and followed. In various clinics the percentage salvage may vary a few points, but the over-all plan is the same. Therefore, what there is to be gained at present is in an unrelenting effort to make people cancer conscious, without fear, and to submit to early and periodic examination.

At the turn of the century radical operation for cancer of the cervix was common, but the results were discouraging and the operative mortality was so high that the procedures fell into disfavor. During the past decade the pendulum has swung back a bit, with modern improvements of surgical technics, preoperative preparations and postoperative cares. In the hands of well trained gynecologic surgeons, who are carefully selecting their cases of early carcinoma of the cervix, the results have been encouraging. However, this is radical surgery in a conservative sense, because those men who have revived the surgical attack of early cervical carcinoma are most concerned that the public will not be misled into the false belief that surgery is applicable to anything but highly selected early cases. These gynecologists likewise fear that poorly trained operators will attempt radical procedures in poorly chosen cases, basing their decisions to operate on those results obtained elsewhere in the most carefully considered cases. Although this revival of the Wertheim operation, with definite modifications, may show some encouraging results in these early cases, it is yet too early to give the evaluation needed to say definitely that it should or should not take its place in our present armamentarium for routine treatment of cervical cancer.

Women have become particularly interested in the detection of early genital cancer by means of the vaginal smear. Without condemning the procedure, it should be said that popular articles in current lay journals have misled women as to the facility and efficacy of the smear in cancer detection. It has been portrayed to them as the simplest procedure imaginable, giving a definite answer to their question if they have genital cancer or not. It has not been so clearly explained that the smear, after preparation, must be examined minutely by a proficient pathologist or cytologist and even then, if cancer is suspected or diagnosed, the patient must be rechecked and proven positive for cancer by actual biopsy before any surgeon or radiologist would submit the patient to the rigors of surgery and/or irradiation therapy.

In some sections of the country, where the vaginal smear is more widely used than in Georgia, it is of value in screening large groups of patients in cancer detection centers where surgical biopsy of every patient would be impractical. Though it would not give the final answer, it would be the indication to check the suspicious cases by biopsy. It is believed that the real value of the vaginal smear in detection of genital cancer is not yet realized, but its potentialities are appreciated and fair trial is being given.

The essence of this article is an appeal urging the medical profession of Georgia to take more cognizance of the prevalence and of the rapidity of growth of cervical carcinoma. Women are coming to ask more and more for their protection against the disease, and, at present, earlier detection is the greatest factor in the small amount of progress we are making. Diagnostic tests for cancer are only in the wishing stage. The possibility of such tests are mentioned in current literature but none is available. The cause and cure of cancer are still as enigmatic as ever, despite the enormity of the effort to find the answer.

In 1917 there were 197 deaths due to cervical cancer, or 7.4 per cent of all cancer deaths of both sexes, in the State of Georgia. It is be-

lieved that this figure can be appreciably lowered if we use our greatest weapon, as yet, against the disease: our constant awaredness of its presence.

JOHN H. RIDLEY, M. D.

## EARLY UROLOGIC DIAGNOSIS AND TREATMENT IN GENERAL PRACTICE

Recent advances in medicine have contributed a great deal to the treatment of diseases of the genito-urinary tract. There is necessity, however, for earlier diagnosis, if full advantage is to be taken of the newer therapeutic agents.

It cannot be emphasized too strongly, for example, that the success of streptomycin and penicillin in urinary infections depends upon their use in adequate dosage before the bacteria have become resistant. If penicillin or streptomycin fastness develops, continued use of these antibiotics is ineffective. But further diagnostic study may reveal other complicating factors than drug fastness as causes of therapeutic failure. Urinary stone, tumor, obstruction or infected areas in communication with the urinary tract are examples. These lesions are amenable to treatment. In general practice the cases necessitating further study can be selected by therapeutic test, if bacteriologic facilities are not available.

*Therapeutic test.* Uncomplicated infection in the urine is often adequately treated by administration of sulfonamides only. Symptoms and pyuria may disappear permanently under this regimen.

If the response is not complete, however, a Gram stain of the centrifuged urinary sediment should be made. This may show Gram negative bacilli, such as *B. proteus*, *B. pyocyaneus* or *Aerobacter aerogenes*, which are refractive to sulfonamides, but may be destroyed by streptomycin. Twice the usual dosage of streptomycin is required for *B. pyocyaneus*. Therefore, 2 grams daily in 3 divided doses should be given for 7 days, unless urine culture proves that this organism is not present.

Gram positive cocci and bacilli may be more effectively treated with penicillin than with sulfonamides. No further studies are necessary, if success is permanent.

However, persistence or recurrence of pus cells in the urine is strong indication for endoscopic study of the bladder and urethra, and for x-ray examination of the kidneys and ureters. The incidence of asymptomatic stone, obstruction, infected foci in communication with the urinary tract and tumor is high enough to justify these procedures.

Clinical experience has shown that bactericides are of temporary benefit only in urinary infection complicated by stone or obstruction. The early discovery and prompt elimination of these lesions will prevent many therapeutic failures, erroneously ascribed to penicillin or streptomycin fastness. Permanent eradication of infection after operation will depend upon repeated microscopic examination of the urine until the findings are negative.

Again, before the infection can be said to be drug resistant, study of infected foci in communication with the urinary tract is indicated. Bacterial stains of the secretions of the cervix, vagina, periurethral glands and prostate may reveal foci of infection which contribute organisms to the urinary tract.

Even drug fast bacteria may be expected, in many cases, to disappear spontaneously following removal of obstruction, foreign body or infected focus. This was a successful method of treatment before the advent of bactericidal agents.

When pyelonephritis becomes chronic and is associated with recurrent infection, the therapeutic problem is a difficult one. Microscopic examination of the centrifuged urinary sediment at regular intervals, even though the patient has no urinary symptoms, may reveal the presence of bacteria. Prompt administration of the appropriate drug or antibiotic will often prevent incapacitating symptoms. In recurrent pyelonephritis this program of prophylaxis may be the only effective therapeutic regimen. Its importance in the prevention of recurrent urinary calculus in these infected cases needs only to be mentioned to be appreciated.

Progress has also been made in the management of congenital obstruction of the proximal urethra and vesical neck in both male and female infants. Miniature instruments for visualizing and removing these obstructions transurethrally have been recently improved. Here, as in the adult, recurrent or persistent pyuria is indication for demonstration of the upper urinary tracts by x-ray examination. This can be done with great clarity by anyone familiar with the various stages of anesthesia. The stage of momentary apnea is used to advantage, while the film is exposed. However, it is still essential to carry out surgical therapy as soon as obstruction has been demonstrated as the cause of frequency, dysuria or diminution in the size and force of the urinary stream. Once the ureters have become flaccid and tortuous and the renal parenchyma has been reduced to a shell, clinical improvement, rather than cure, is to be expected. Removal of obstruction, and the administration of maintenance doses of bactericides to minimize infection, is the therapeutic program.

Hematuria remains as the most important early sign of neoplasm in the urinary tract. When this sign appears, even though it may be found only on microscopic examination, its site of origin must be identified without delay.

Whereas it may be practical to ascribe bleeding to more common causes, such as acute cystitis or nephritis, this involves the risk of failure to treat cancer early. The recurrence of hematuria is even more mandatory indication to search for the site of bleeding.

Review of the history in cancer of the urinary

tract reveals many examples of only one episode of bleeding. The spontaneous disappearance of this sign, or its masking by medication which produces a red hue in the urine, results in a false sense of security. The next symptoms may be those of the disease in an advanced state, too late for cure.

In summary, many urinary tract infections will respond to administration of sulfonamides, penicillin and streptomycin, frequently given in general practice.

Some of the therapeutic failures may be caused by resistance or fastness to these agents. However, endoscopic and x-ray studies of the urinary tract may reveal other causes which are more amenable to treatment, such as stone, obstruction and localized infection. The early discovery and elimination of these is essential, if maximal benefit is to be obtained from these bactericides.

JAMES H. SEMANS, M. D.

## NERVOUSNESS IS FACTOR IN MOTION SICKNESS

Nervous people are especially susceptible to motion sickness, according to James A. Brussel, M. D., of the Willard State Hospital, Willard, N. Y.

Writing in the November issue of *Hygeia*, health magazine of the American Medical Association, Dr. Brussel says that air sickness, sea sickness, and train sickness are all the same condition—motion sickness.

There is evidence that motion sickness is caused by disturbance of the labyrinth of the internal ear, he explains. The rolling of an airplane or ship or the swaying of a train causes repeated rotation of the labyrinth. These tiny bones and fluid encased in an interlocking series of bony canals receive stimuli that are transmitted to the brain as sensory impulses so that righting and balancing mechanisms come into play. Abnormal stimulation of the labyrinth makes reciprocal balancing impossible, so that motion sickness is the "overt expression of failure to maintain normal balance."

"Impulses are transmitted from the labyrinth to the brain over nervous pathways whose fibers are concerned also with vision, heart action, and digestion. Hence the observation of nausea, vomiting, and giddiness," Dr. Brussel points out.

Infants, persons born deaf, and aged people are seldom victims of motion sickness, he says. In infants, the labyrinth is immature; congenitally deaf persons are insusceptible to the condition because the labyrinth is imperfect, and senile atrophy of the mechanism accounts for the fact that the aged seldom suffer from motion sickness.

There are five secondary factors that aid in producing motion sickness, Dr. Brussel says.

"The first is individual susceptibility. This feature cannot be explained on a tested basis, although the differences probably depend on variations in the threshold of excitability of the reflex nervous mechanisms giving rise to symptoms. Susceptibility is affected by poor physical health and by emotional states.

"The second factor is gastrointestinal disturbances. Dyspepsia, upset stomachs and indigestion give rise to sensory impulses that produce a facilitating effect on the susceptibility of the vital centers to abnormal impulses from the labyrinth.

"Third, there are disturbances of vision. The eye is an important factor in maintaining balance. The passenger stares out the window but cannot fix his gaze on any one landmark. This procedure, producing ocular fatigue, has an important effect in creating motion sickness.

"Fourth, the vagus nerve influences the susceptibility to motion sickness. Impulses from the labyrinth reach this nerve which is concerned with the sensation and motion of many organs and systems, including the gastrointestinal tract, lungs, heart, and throat:

"Finally, there is the role of the mind. Many travelers recall the trip on which they were feeling fine until they saw another passenger suddenly vomit, or an unpleasant odor crossed their nostrils."

Dr. Brussel gives this advice about avoiding motion sickness:

"Prior to any voyage, the traveler should watch his diet to avoid excesses and indiscretions. A good sleep is an excellent prophylactic measure. Avoid the excitement, if possible, that seems to be traditionally associated with last minute preparations. Have money orders and tickets and reservations ready. Pack two days previously rather than the night before.

"If symptoms develop, do not try to fight them. Lie down, because the bony loops containing fluid are stimulated least when the body is in a horizontal position.

"Irritation of the stomach can be reduced by abstaining from salty and highly spiced foods. Liquids, swishing around in the stomach cavity with changes in motion, irritate the stomach walls and facilitate the production of motion sickness.

"One of the best drug combinations to date has been the 'antimotion pill' that the armed services supplied to military and naval personnel during the war. The basic ingredients were a sedative and a drug which tend to decrease stomach and intestinal movement, thereby lessening the sensations of nausea and gastric distress.

"Prospective travelers should see their physician, and, if he prescribes this type of treatment, adhere strictly to the limits he lays down. If the antimotion pill induces drowsiness, do not fight it. Lie down and sleep it off so that you can awaken refreshed and somewhat inured to the unusual motion of the vehicle."

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The Medical Association of Georgia will meet in Savannah May 10-13, 1949. Have you made your hotel reservations in Savannah?

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

# PRESENT STATUS OF THE HOOKWORM PROBLEM IN GEORGIA

JOHN E. McCROAN, JR., Ph. D.
*Division of Epidemiology*
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*Atlanta*

### *Introduction*

Recent studies on the incidence of simple hookworm infection in Georgia indicate that hookworm infection, as distinguished from hookworm disease, is about as common as it was during the decade 1930-1939 and, presumably, of the same general order of incidence as that experienced during earlier periods. However, as is well known to the older generation of practicing physicians, the number of cases of frank hookworm disease, i.e., the number of heavily infected persons, has grown progressively less during the years.

It is therefore essential in any discussion of the significance of the hookworm problem to distinguish between light and heavy infections and between the public health problem involved and the problem of handling an individual patient who is infected with hookworms.

When used in connection with worm diseases, the term *infection* is sometimes misleading. Hookworms do not multiply within the host animal. Indeed, a short external phase is obligatory for the completion of the life cycle and reinfection through the skin (or very occasionally by mouth) is essential to any increase in numbers within a host animal. *Infection* as used in the literature of parasitology implies merely that the parasitic organism lives within the host instead of on the host. Therefore, hookworms infect but fleas infest. Since many worm parasites do multiply within the host, and produce their main effect by the production of larval stages, the parasitologist certainly has some justification for striving to avoid too specific a terminology. Nevertheless, the necessity for an external phase in the hookworm should be emphasized since this fact is the key to hookworm epidemiology.

### *Observations*

Hill and Andrews (1942) showed that symptoms of hookworm disease are rarely seen in Georgia in individuals with less than 5000 eggs per cc. of stool (roughly 200 worms) and that the severity of the disease increased with the number of worms apparently present. About 10 per cent of all persons examined by egg counting in recent years (including private patients for whom the average is generally lower) have 5000 eggs per cc. or more. On the basis of these conservative figures, approximately 1250 cases of hookworm disease occurred last year in Georgia. Obviously, if more persons were examined a larger number of damaging infections might be found but the percentage of serious infections would probably decrease. Recent experience indicates, however, that unsuspected foci of serious infection continue to exist even in economically well favored rural communities.

It should be pointed out that experience with hookworm varies widely from county to county and in various population groups. Counties above a line Augusta-Macon-Columbus (the fall line) have very little hookworm, whereas most of the serious infections are found in the southeastern and southwestern corners of the State. Soil type and not climate is the effective factor here. For this reason, islands of infection exist in areas which are relatively free of hookworm problems and various gradients of infection can be traced where the soil type does not change sharply from one geologic region to another.

Populations of sewered cities and towns are seldom infected, except during visits to the country. The incidence of hookworm in Negroes is uniformly less than among whites. Table 1 illustrates the results of a three-year study on this point.

TABLE 1

*Hookworm Incidence in Whites and Negroes. Clinic Patients and Selected Persons, Examined by Health Departments, Totals for 1943, 1944, and 1945*

| | *White* | *Negro* |
|---|---|---|
| Number Examined | 15,209 | 929 |
| Number Positive | 7,984 | 135 |
| Percentage Positive | 52.50 | 14.53 |
| Percentage with Egg Counts over 2000 per cc. | 28.85 | 3.33 |

It has been realized from the first that the state of nutrition of the patient is usually the factor which determines the amount of damage done by a hookworm infection. A poorly nourished child may become clinically ill with an infection of comparatively low intensity. It is unfortunately also true that a poorly nourished individual fails to develop and maintain an immunity to reinfection and super-infection with hookworms. Therefore, hookworm both profits by and intensifies malnutrition. If all persons were properly nourished, hookworm infection would be less common and hookworm disease would be extremely rare.

Reduction of hookworm incidence and damage by improvement in nutrition is therefore one of the principal aims of the control program. But improvement in the general level of nutrition will be extremely slow. Improvement in general sanitation would be more rapidly effective as a hookworm control measure and, it is believed, easier to bring about. If the majority

of farm families had, and used, adequate toilet facilities, hookworm, roundworm, and many other excreta-borne diseases would tend to disappear.

The degree of rural insanitation which has persisted into modern times is surprising. Table 2 gives a partial summary of the data obtained by U. S. Public Health Service, Extended Malaria Control, field workers who made sanitation surveys in 49 counties in preparation for the 1947 DDT housespraying program.

TABLE 2

*Rural Home Sanitation in 49 South Georgia Counties.*

| | *Number* | *Per Cent of Total No.* |
|---|---|---|
| Rural Homes (including smaller towns | 145,590 | 100.0 |
| Homes with no toilet of any kind | 12,694 | 8.7 |
| Homes with open-back outside toilets | 85,802 | 58.9 |
| Homes with pit toilets or with flush toilets connected to a Septic Tank or Sewage System | 47,094 | 32.4 |

A third factor of importance affects the present hookworm problem. Tetrachlorethylene, the present drug of choice, while superior to carbon tetrachloride, chenopodium, thymol, santonin and other predecessors as a safe anthelmintic, is not a particularly effective drug. It is so uncertain in result that a re-check of each patient treated is essential. Retreatment and re-check again is frequently needed. Table 3 shows the result of a two year study on patients re-examined within two months after treatment by the Health Department. The two months period was chosen because reinfection could not have influenced the result within that period.

TABLE 3

*Individuals Examined Within Two Months After Treatment with Tetrachlorethylene by Health Department Physicians Using Standard Procedures*

| | *1944* | *1945* | *Totals* | *Per Cent* |
|---|---|---|---|---|
| Number Treated | 469 | 530 | 999 | 100 |
| Number Negative | 225 | 221 | 446 | 44.6 |
| Number Positive | 244 | 309 | 553 | 55.4 |

### *Conclusions*

The facts cited above seem to justify two conclusions:

a. It is essential that heavy individual and familial infections be diagnosed and treated. During this process, a direct attempt to improve sanitation in the families involved is indicated. Practicing physicians can greatly aid the local Health Departments by calling attention to infections of this type. However, all positive cases should be treated. The amount of time which the Health Departments can and should devote to low grade infections will be determined by the resources of the department and the local intensity of hookworm.

b. Equal emphasis should be placed by both the practicing physician and the Health Department on long term, continued programs for the improvement of sanitation and nutrition.

### *Summary*

Hookworm infection remains a serious public health problem in Georgia and hookworm disease is unfortunately not of rare occurrence. Improved methods of treatment and better general nutrition would go far toward improving the situation but the key to rapid progress in dealing with hookworm and related diseases is rural sanitation.

### REFERENCE

1. Hill, Arthur W., and Andrews, Justin: Relation of Hookworm Burden to Physical Status in Georgia. Am. J. Trop. Med. 22:496-506.

## NEWS ITEMS

Dr. H. T. Adkins, Waycross, has returned from Knickerbocker Hospital, New York City, where he completed a refresher course on the use of the iron lung in the treatment of infantile paralysis. The course, the 25th held in three years, is made possible by grants from the National Foundation for Infantile Paralysis and its Greater New York Chapter, using funds collected during the annual march of dimes drive.

* * *

The joint meeting of the state chapter of members of the American College of Surgeons and the Georgia Urological Association met at Macon, November 4. Dr. Frank Berry, of New York City, and Dr. Lloyd G. Lewis, of Washington, D. C., were the guest speakers. The meeting was held at the Idle Hour Country Club, Macon. Dr. Charles Wasden and Dr. Wallace Bazemore were in charge of reservations.

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The Bibb County Medical Society held its meeting at the State Board of Health Building, Macon. Program: "Medical Emergencies", by Dr. H. C. Atkinson. Dr. A. M. Phillips, secretary.

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Dr. Enoch Callaway, of LaGrange, president-elect of the Medical Association of Georgia, spoke recently to the Kiwanis Club, Manchester, and their guests, the teachers in the Manchester schools. His subject was "Medical Ethics".

* * *

Dr. Frederick D. Cheney, formerly of Thomasville, has been named chief of medicine at VA Hospital, Dublin. Dr. Cheney is a native of Indianapolis and received his M.D. degree from Indiana University School of Medicine, Bloomington-Indianapolis. He later took special training in internal medicine at St. Louis University School of Medicine. He is a member of the Thomas County Medical Society, the American Medical Association and the Board of Internal Medicine.

* * *

Dr. Guy Harlan Adams, Atlanta, announces the opening of his office at 85 Merritts Avenue, N. E., Atlanta, for the practice of internal medicine.

* * *

The Chattooga County Medical Society held its monthly meeting at Summerville, September 16. Dr. Howell P. Holbrook was host to members of the society. Dr. William U. Hyden, of Trion, president, presided. Two interesting papers were presented by Drs. R. N. Little and William T. Gist.

* * *

Dr. E. M. Christensen, formerly of Birmingham, is the new medical director of Alto Medical Center, Alto. He succeeds Dr. W. F. Edmondson, who has resigned from the U. S. Public Health Service, and after completing courses at the Mayo Clinic, Rochester, Minn., he plans to do private practice in Pittsburgh, Pa.

* * *

Dr. Joseph B. Cooley, Decatur, who served with the U. S. Army Medical Corps in California for two years, announces the opening of his offices at 305 Church Street, Decatur. Dr. Cooley graduated from the University of Georgia School of Medicine, Augusta, and in-

terned at the Crawford W. Long Memorial Hospital, Atlanta.

* * *

The Eighth District Medical Society held its semi-annual meeting at the Casino, Sea Island, Brunswick, October 5. Program: Meeting called to order by Dr. Dan A. Jardine, Douglas, president; Invocation by the Rev. C. Logan Landrum, Brunswick, pastor of the Methodist Church; Address of Welcome by Dr. J. B. Avera, Brunswick; and Response to the Address of Welcome by Dr. G. T. Hendry, Blackshear. Scientific program: "Pseudohermaphroditism in Twins—Report of Tenth Case, With Discussion", Dr. T. W. Collier, Brunswick; "Injuries of the Urinary Tract", Drs. W. F. Reavis and L. W. Pierce, Waycross; "Retropubic Prostatectomy", Dr. J. L. Campbell, Jr., Valdosta; "Recent Advances in Ophthalmic Surgery", Dr. B. H. Minchew, Waycross; "Roentgenologic Diagnosis of Common Diseases of the Digestive Tract", Dr. F. G. Eldridge, Valdosta. New officers are: Dr. H. A. Seaman, Waycross, president; Dr. J. B. Avera, Brunswick, vice-president; and Dr. G. T. Crozier, Valdosta, secretary.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, October 7. Scientific program: Symposium: "Topics of Current Interest in Internal Medicine" presented by members of the Department of Medicine, Emory University School of Medicine, Dr. Paul B. Beeson presiding. "Chemotherapy of Neoplastic Diseases", Dr. Charles M. Hnguley, Jr.; "Treatment of Hypertension", Dr. Walter H. Cargill, Jr.; "Rest and Anticoagulants in Therapy of Myocardial Infarction", Dr. David F. James; and "New Antibiotic Agents", Dr. Max Michael, Jr.

* * *

The Georgia Medical Society held its regnlar meeting at the Candler Nurses' Auditorium, Savannah, October 12. Topic: "Medical Economics". Dr. Stephen J. Lange, secretary.

* * *

Dr. Marcus L. Howard, Dawsonville practitioner, has been promoted from Lieutenant to Lieutenant Commander, Medical Corps of the U. S. Navy Reserve, after completing two weeks of active duty at the Naval Air Station, Atlanta. Dr. Howard is a veteran of World War II and served as battalion surgeon in the 2nd Marine Base on Saipan Island. He participated in the invasion of Saipan, Tinian and Okanawa, in the Pacific theater of operations. He is a graduate of Georgia Washington University School of Medicine, Washington, D. C. He is also representative in the State Legislature from Dawson County.

* * *

Dr. Robert W. Graves, Rome, announces the opening of his office at 200 East Third Street, Rome. Practice limited to consultation in neurology.

* * *

Dr. Charles M. Garland, Jr., formerly of Dillwyn, Va., announces his association with Dr. W. D. Mitchell, Smyrna. Dr. Garland graduated at the University of Virginia Department of Medicine, Charlottesville, Va., and served his internship at Baroness Erlanger Hospital, Chattanooga, Tenn. For two years he served in the Medical Corps of the U. S. Navy, and recently completed a year's work at Crawford W. Long Memorial Hospital, Atlanta, where he specialized in obstetrics and gynecology.

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Dr. Dan A. Jardine, Douglas, was recently honored by an invitation to become a fellow in general surgery in the American College of Surgery. Dr. Jardine went to Los Angeles, Calif., where he was recipient of this honor.

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Dr. Ruskin King, Savannah, president of the Chatham-Savannah Health Council, will lead a drive for funds for the American Social Hygiene Association. This is the sole national voluntary agency combating venereal diseases and it gives year-round support to Savannah agencies. Dr. C. A. Henderson, Savannah, city-county health officer, will serve with Dr. King.

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Drs. J. W. Landham and Geo. F. Klugh, Atlanta, announce the removal of their clinical and x-ray laboratories to 736 Piedmont Avenue, N. E., Atlanta.

## OBSTETRICS SEMINAR, AUGUSTA, DECEMBER 6-10, 1948

Given under the auspices of the Maternal Welfare Divisions of the State Departments of Public Health of Georgia and South Carolina, an Obstetric Seminar will be held at the University of Georgia School of Medicine, Augusta, December 6-10, 1948. Dr. Hilla Sheriff, Columbia, S. C., and Dr. Guy V. Rice, Atlanta, will supervise the program.

All general practitioners who wish to attend this meeting are asked to notify Dr. Richard Torpin, Professor and Chairman of the Department of Obstetrics, University of Georgia School of Medicine, Augusta, not later than Dec. 1, 1948. The registration fee for the seminar will be $25, which includes the cost of noon meals and refreshments.

The following program will be offered:

"Prolonged Labor," R. A. Bartholomew, M.D., Atlanta, Georgia.

"Antepartum Hemorrhage," Lester A. Wilson, M.D., Charleston, S. C.

"Nutrition in Pregnancy," Winslow T. Tompkins, M.D., Philadelphia, Pa.

"Prenatal Care," John M. Fleming, M.D., Spartanburg, S. C.

"Cytology Studies as a Diagnostic Aid in Carcinoma of the Cervix," Robert E. Seibels, M.D., Columbia, S. C.

"Maternal Mortality and Infant Mortality in Georgia," H. F. Sharpley, Jr., M.D., Savannah, Georgia.

"Maternal Mortality and Infant Mortality in South Carolina," Jack Parker, M.D., Greenville, S. C.

"Management of Labor, Including the Minor Abnormalities and Signs of Serious Complications," Guy C. Hewell, M.D., Atlanta, Georgia.

"Cervix—Antepartum, Intrapartum, and Postpartum," Hartwell Boyd, M.D., Atlanta, Georgia.

"Vaginal Discharges and Irritations During Pregnancy," W. W. Coppedge, M.D., and Frederick R. Minnich, M.D., Atlanta, Georgia.

"Disturbances of Ovulation," Robert B. Greenblatt, M.D., Augusta, Georgia.

"Abortion," Manly E. Hutchinson, M.D., Columbia, S. C.

"Ectopic Pregnancy," John B. Cross, M.D., Atlanta, Georgia.

"Application of Forceps in Obstetrics," J. Wm. Thurmond, M.D., Augusta, Georgia.

"Venereal Diseases in Pregnancy," John R. McCain, M.D., Atlanta, Georgia.

"Cesarean Section," G. A. Holloway, M.D., Atlanta, Georgia.

"Anesthesia in Labor," Perry P. Volpitto, M.D., Augusta, Georgia.

"Objectives of a State Maternal Welfare Committee," J. Decherd Guess, M.D., Greenville, S. C.

"Abortion," Charles Mulherin, M.D., Augusta, Georgia.

"Relationship of Delivery to Pelvic Relaxation," James M. Wilson, M.D., Charleston, S. C.

"Sterility," Abraham S. Velkoff, M.D., Atlanta, Georgia.

"Breech Deliveries," Eugene L. Griffin, M.D., Atlanta, Georgia.

"Puerperal Sepsis," Marion T. Benson, Jr., M.D., Atlanta, Georgia.

"Prematures," Philip Mulherin, M.D., Augusta, Georgia.

Dr. Richard Torpin will fill in for any lecturer who may be unavoidably detained.

Dr. Thomas A. McGoldrick, Savannah physician, declared on his recent return from a national medical meeting in Chicago that the opposition of the medical fraternity to socialized medicine does not spring from the motives which its advocates have charged. At the meeting were 176 delegates from doctors and dentists all over the nation. They met to consider the evidence for and against socialized medicine. Dr. McGoldrick said the charge that doctors oppose socialized medicine for reasons of selfishness was unfounded. He said a compulsory health insurance program is but an entering wedge to the socializing, not only of medicine but of all public institutions. This means the "destruction of private enterprise as we know it, under which medicine has progressed in America to the highest point ever reached in the civilized world," he said.

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Dr. Carey A. Mickel, Jr., formerly of Atlanta, and recently returned from military service in Japan, announces the opening of his office at Elberton, for the general practice of medicine.

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The Bulloch County Hospital, Statesboro, was presented a handsome portrait of the late Dr. A. J. Mooney, Sr., by the Philathea Class of the Statesboro Baptist Sunday School, September 26. Dr. Mooney was the greatly beloved teacher of the Philathea Class for 16 years, and as a tribute to his memory the portrait will hang in the lobby of the hospital to which he contributed many years of labor and devotion.

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Dr. James N. Mullins, formerly of Canton, Tenn., announces the opening of his office in the Cohutta Bank Building, Chatsworth; practice limited to medicine and surgery. He graduated from Tulane University of Louisiana School of Medicine, New Orleans, and served his internship at Nashville General Hospital, Nashville, and was resident surgeon for a year at Robert B. Green Hospital, San Antonio, Texas. He served in the Medical Corps of the U. S. Army for two and a half years with the 82nd Airborne Division during World War II.

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Dr. R. A. Pumpelly, formerly of Waycross, announces his association with Dr. W. W. Sharpe, Alma, in the general practice of medicine. Dr. Pumpelly has been associated with the staff of the Atlantic Coast Line Hospital, Waycross.

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Dr. J. A. Redfearn, Albany physician, who treats diseases of the heart, recently spoke to the members of the Moultrie Lions Culb. "There's no need to get upset and think your heart is about to quit work", Dr. Redfearn declared. "Quite frequently the condition is traceable to the nervous system and not the heart. But getting excited causes the heart to race and results in its owner becoming really upset. Keep cool and calm. Take it easy and don't get unduly excited. Things work out just as easily if that course is followed." Dr. Redfearn was accompanied to Moultrie by his associates, Drs. Paul T. Russell and J. M. Sutton.

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The Roberts' Memorial Clinic, Atlanta, announces the association of Dr. John deR. Slade, 768 Juniper Street, N. E., Atlanta, for the practice of internal medicine. Drs. Vernon E. Powell, E. Van Buren and Byron J. Hoffman.

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The Second District Medical Society met at the Legion Home, Spence Post No. 31, Thomasville, October 14. Meeting called to order by Dr. Ernest Wahl, Thomasville, president; Reading of the Minutes; Announcements, and Introduction of visitors. Scentific program: "Hypertension", Dr. Paul T. Russell, Albany; "Brachial Neuritis Due to Cervical Intervertebral Disc Lesions", Dr. Exum Walker, Atlanta; "Internal Fixation of Fracture of the Neck of the Femur", Dr. F. M. Gay, Moultrie; and "Presentation of a Case of Rocky Mountain Spotted Fever", Dr. John Morton, Thomasville. Officers are: Dr. Ernest Wahl, Thomasville, president; Dr. J. P. Tye, Albany, vice-president; and Dr. J. C. Brim, Pelham, secretary.

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Dr. John G. Sharpley, a native Savannahian, was recently appointed assistant chief surgeon of the hospital department of the Central of Georgia Railway. This is a newly-created position. Dr. Sharpley graduated from the University of Georgia School of Medicine, Augusta, and also is a graduate of the University of Pennsylvania School of Medicine, Philadelphia, with a master of surgery degree. He is a fellow in the American College of Surgeons. He served for three years and five months during World War II, entering as a captain and being advanced to major. He was overseas two years and seven months, being stationed most of the time at the U. S. Army Air Corps Hospital, Warton, England, the only American hospital of its kind in Europe. At the Ardennes Bulge he was in the field of action on the continent. He is a brother of Dr. H. F. Sharpley, Jr., and Dr. Helen Sharpley, also of Savannah, all noted physicians of today.

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Dr. Vilda Shuman, formerly of Richland, Wash., announces the opening of her office in the Bunn Building, Waycross. Practice limited to pediatrics. Dr. Shuman, a native of Monticello, Fla., was at Coolidge for a number of years. She graduated from Vanderbilt University School of Medicine, Nashville, in 1940. Since that time she has been located in internships and residencies at Children's Memorial Hospital, Montreal, Quebec, Canada; Memorial Hospital, Albany, N. Y.; Children's Hospital, Philadelphia, and Strong Memorial Hospital, Rochester, N. Y. Prior to coming to Waycross, Dr. Shuman spent two years at the Hanford Atomic Bomb Plant, Richland, Wash.

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Dr. George W. Straight, Savannah, announces the opening of his offices at 202 East Gaston Street, Savannah, for the general practice of medicine and surgery. Dr. Straight has been resident surgeon at the Central of Georgia Railway Hospital, Savannah, for the past two years. He served overseas during World War II, and is a graduate of Vanderbilt University, and Vanderbilt University School of Medicine, Nashville.

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Dr. J. S. Tankersley, Ellijay, retired physician with 63 years of unbroken membership and as a past master of Bowery Lodge 81, F. & A. M., was recently presented a 50-year button by Grand Master J. Clayton Perry, Woodbine. Presentation ceremonies were held at the home of Dr. Tankersley.

* * *

Dr. J. A. Thrash, Columbus, was recently appointed as executive director of the City Hospital, Columbus. The creation of the post of executive director places in charge of the hospital a man who has had many years' experience in health work and who has the full backing of the physicians of Columbus. Dr. Thrash is head of one of the finest health departments in the country and it is believed that he will be able to give the City Hospital the kind of leadership that is necessary to establish it as one of the best in the United States.

* * *

The Southern Tuberculosis Conference met at the Hotel DeSoto, Savannah, September 30-October 2. Approximately 300 persons representing state and local tuberculosis associations affiliated with the National Tuberculosis Association and State Trudeau Societies, medical sections of the associations, from 16 states attended the conference. Dr. Clair A. Henderson, Savannah, commissioner of health, Savannah-Chatham County, presided over the opening session when "Unmet Needs in Tuberculosis" were discussed. Other Georgia physicians on the program were Dr. C. C. Aven, Atlanta; Dr. H. C. Schenck, Atlanta, director, division of

TB Control, Georgia Department of Public Health: and Dr. Rufus F. Payne, Rome, superintendent, Battey State Hosptial, Rome.

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The Southern Medical Association, second only to the American Medical Association as the world's largest organization of physicians, met in Miami October 25-28. A number of Georgia physicians and their wives took part on the program. Mrs. Olin S. Cofer, Atlanta, is president of the Woman's Auxiliary to the Southern Medical Association and presided over four sessions of that body. Other Atlanta doctors' wives taking prominent part were Mrs. Hugh H. Gregory, Mrs. Edgar H. Greene, Mrs. W. A. Selman, Mrs. John W. Turner, Mrs. Eustace A. Allen, Mrs. James N. Brawner, Sr., and Mrs. W. G. Elliott, Cuthbert.

Scientific sessions were in charge of a number of Georgia physicians. Dr. Steve P. Kenyon, Dawson, was vice-chairman of the section on general practice; Dr. Hervey M. Cleckley, Augusta, was chairman of the section on neurology and psychiatry; Dr. Mason I. Lowance, Atlanta, was vice-chairman of the section on allergy; and Dr. Murdock Equen, Atlanta, was chairman-elect of the section on ophthalmology.

The following physicians presented scientific papers: Stacy Howell, Atlanta; Joe L. Berg, Albany; Peter B. Wright, Augusta; Edgar M. Dunstan, Atlanta; Mason I. Lowance, Atlanta; Eugenia C. Jones, Atlanta; Fred W. Cooper, Jr., Emory University; Charles W. Hock, Augusta; Robert C. Pendergrass, Americus; Wm. L. Dobes, Atlanta; Herbert S. Alden, Atlanta; J. Mason Baird, Atlanta; Harriet Gillette, Atlanta; C. E. Irwin, Warm Springs; W. G. Hamm, Atlanta; David Henry Poer, Atlanta; Harold P. McDonald, Atlanta; M. K. Bailey, Chester A. Fort, both of Atlanta; Marion C. Pruitt, Atlanta; Edgar Boling, Atlanta; Hervey M. Cleckley, Augusta; Lawrence F. Woolley, Atlanta; Carl A. Whitaker, Atlanta; Howard Hailey, Atlanta; Robert L. Bennett, Warm Springs and Atlanta; Robert B. Greenblatt, Augusta; Lucille J. Marsh, Atlanta; M. J. Pescor, Atlanta; Hal M. Davison, Atlanta, and A. Worth Hobby, Atlanta. Other Georgians led discussions. Scientific exhibits and films were sponsored by the medical schools of Emory University and the University of Georgia, the Georgia Warm Springs Foundation and the communicable disease center of the U. S. Public Health Service, with headquarters in Atlanta. Dr. Edgar H. Greene, Atlanta, president of the Medical Associatiaon of Georgia, attended the meeting.

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Dr. John W. Turner, Atlanta, announces the association of Dr. Joseph H. Morris, in the practice of general surgery at 151 Ponce de Leon Ave., N. E., Atlanta.

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The Upson County Medical Society held its regular dinner meeting at Hotel Upson, Thomaston, October 5. Eleven members of the society were present. Also four guests included Dr. C. Purcell Roberts, Atlanta; Dr. J. H. Grubbs, Molena; Dr. M. M. Head, Zebulon; and Dr. D. W. Pritchett, Barnesville. Dr. R. E. Dallas, Thomaston, president of the society, presided over the business session. A motion was made and passed that a charge of $10 will be made for administering Red Cross blood; this price does not include cross matching, typing or hospitalization. For blood taken from a donor—not using Red Cross blood—the minimum charge will remain $25 per transfusion. The above prices are minimum and any complication will increase the cost whether local donor or Red Cross blood is used. An adequate supply of Red Cross blood will be kept on refrigeration at Thomaston. Dr. J. E. Garner, the program chairman, introduced the guest speaker, Dr. C. Purcell Roberts, who gave an able presentation of "Present Concepts of Heart Diseases and Their Treatment by the General Practitioner." An informal discussion followed. Dr. Ivylyn Girardeau, secretary.

The University Hospital, Augusta, recently installed a physicians' "in and out" board to record the presence of doctors in the hospital. The board cost approximately $2,000, erected in two sections, one outside the telephone operator's office, the other installed above the hospital switchboard now contains 80 names, with space for an additional 40 names. As each physician enters the hospital, he presses a switch opposite his name illuminating the plate, thus informing hospital personnel and the switchboard operator of his presence in the hospital. This system eliminates the many minutes wasted while operators or administrators endeavor to locate the physician, only to find that he has left the hospital.

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Dr. William O. White, Augusta, announces the opening of his office in the Doctors Building, 1345 Greene Street, Augusta, for the practice of ophthalmology. Dr. White graduated from the University of Georgia School of Medicine, Augusta. Following his internship at the Marine Hospital, Seattle, Wash., he entered Army service where he did service at Mayo Clinic, Rochester, Minn., for a year, and served the other year in the Far East. After his release from service he had a residency at Duke Hospital, Durham, N. C., for 18 months. Recently he has been a member of the study council of the American Board of Ophthalmology, Portland, Me.

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Dr. Lee Williams, Cordele physician, has made application for permit to construct a 20-room hospital in connection with a building now used for offices. Both Dr. Lee Williams and Dr. L. E. Williams maintain offices in the present structure. He states that the hospital will be a two-story fire proof structure with all modern hospital facilities. Dr. Williams has been practicing medicine in Cordele for a number of years and is widely known throughout the Crisp County section. He is president of the Third District Medical Society. Congratulations on progress in Tift County!

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The State Board of Medical Examiners of Georgia are Dr. T. H. Clark, Douglas, president; Dr. J. W. Palmer, Ailey, vice-president; Dr. Rufus Askew, Atlanta; Dr. Murdock Equen, Atlanta; Dr. Hartwell Joiner, Gainesville; Dr. Steve P. Kenyon, Dawson; Dr. Q. A. Mulkey, Millen; Dr. L. G. Neal, Cleveland; Dr. W. H. Wall, Blakely, and Dr. R. F. Wheat, Bainbridge. Mr. R. C. Coleman, Atlanta, joint secretary.

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The Fulton County Medical Society held its semimonthly dinner meeting at the Academy of Medicine, Atlanta, October 21. Scientific program: Dr. Alton V. Hallum, presiding. The staff of the Junior League for Speech Correction demonstrated technics of speech correction with children whose speech is delayed or defective. Five principal areas of speech disorders were discussed: Speech and lip reading with the preschool deaf; language development and training of residual hearing with children with severe hearing losses; speech correction for the cerebral palsy; speech correction for adults with an articulatory defect; and controlled speech for the stutterer, by Miss Mary Rose Costello, director; Miss Millie Roche; Miss Frances Ross, Mrs. Henry Walcutt, and Mrs. Sara Durrani. "Hospital Needs in Fulton and DeKalb Counties," Mr. Hughes Spalding.

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Dr. T. V. Willis, Brunswick, recently spent three weeks at the Chicago Medical Center, Chicago, where he took a refresher course in obstetrics. The medical center is considered one of the foremost in the field of obstetrics. Dr. Willis has returned to Brunswick and his medical practice.

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Dr. Edgar H. Greene, Atlanta, president of the Medical Association of Georgia, recently attended the centennial meeting of the Medical Society of the State of Pennsylvania, which was held in Philadelphia.

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# RADIUM IRRADIATION OF THE NASOPHARYNX FOR HYPERTROPHY OF LYMPHOID TISSUE

B. H. Minchew, M.D.
and
B. E. Collins, M.D.
*Waycross*

The irradiation treatment of lymphoid hypertrophy in the nasopharynx, when hearing is impaired, has become common practice among otologists. The popularity has grown because pioneers in the work have arrived at safe and adequate dosages. Radium applicators have also become available for convenient purchase or rent.

Heineke[1] showed in 1905 that lymphoid tissue is highly sensitive to irradiation, but no clinical application was made of the knowledge. Eagle and Reeves[2] reviewed the literature and found no reference to therapeutic irradiation of pharyngeal lymphoid tissue previous to 1920. There was then a rise of enthusiasm for irradiation of tonsils and other pharyngeal lymphoid tissue, but by 1932 this enthusiasm for treatment of the tonsils had vanished. It was learned that the encapsulated lymphoid tissue, such as is found in the tonsil, did not respond well. But the interest has continued to grow in the treatment of non-encapsulated tissue, such as adenoids or nodules scattered over the pharyngeal walls.

Jarvis[3], in 1925, recommended x-ray irradiation of the nasopharynx and Fowler[4] used a bougie containing 2 mg. of radium in the nasopharynx. Crowe[5] and his co-workers deserve the credit for popularizing the use of radon and radium irradiation of the nasopharynx for conductive deafness caused by the mechanical obstruction of the Eustachian tubes by lymphoid tissue. Crowe[5a] reported his use of radon applicators in the nasopharynx which he began in 1924. In the same article he stated that, contrary to popular opinion, the conductive type hearing loss in children which is caused by obstruction of the Eustachian tubes is first for high tones rather than for low tones. As the process continues, successively lower tones are involved until the conversational range is impaired.

There are three main types of chronic ear disorders which cause interference with movements of the ossicular chain. One is otosclerosis, which is not concerned in this report. Another is fibrosis of the middle ear cavity, which is not concerned here. The third is the malfunctioning of the Eustachian tube by mechanical blockage with lymphoid tissue. It is to this type that we direct attention.

### *Incidence and Diagnosis*

Lymphoid hypertrophy of the nasopharynx constitutes the most common cause for conductive deafness in children. Lymphoid tissue is an integral part of the mucosa of the nasopharynx. The full thickness of adenoids and mucosa can be removed surgically from the vault and partially from the fossae of Rosenmueller. But the mucosa that grows back over the operative wound contains lymphoid tissue and nodules may

Read before the Medical Association of Georgia, Atlanta, April 29, 1948.

form. These nodules tend to hypertrophy following infection of the upper respiratory tract. It is not so much the size but the location of the nodules which interferes with Eustachian tube function. Hypertrophy in the vault may be relatively harmless, but large or small nodules in or near the ostia may produce a severe type of conductive deafness. These are so located that they cannot be removed surgically. Too, extensive surgical removal of lymphoid tissue may result in scar tissue formation with damage and permanent closure of the Eustachian tube orifices. Although lymphoid usually regresses following puberty, it must be dealt with during childhood if the Eustachian tube is partially or totally blocked.

Leading otologists[5b, 6] have estimated there are 15,000,000 deaf or partially deaf people in the United States, and that 50 per cent of the deafness in adults could be prevented. To accomplish this physicians must be alert for hearing impairment in children who have lymphoid recurrence following tonsil and adenoid operations. They must look for recurrent adenoids or nodules in or around the Eustachian orifices. Nodules may appear on the posterior pharyngeal wall, lateral walls or tonsillar pillars. This recurrence frequently receives the descriptive term "granular pharyngitis". Although patients may be found with large adenoids, properly functioning Eustachian tubes and good hearing, this finding is not common. It is usual, however, to find lymphoid blockage of the Eustachian ostia as the cause for defective hearing.

Adults present subjective symptoms of tinnitis or discomfort when their Eustachian tubes do not function properly. Children do not report these symptoms, but poor hearing may be suspected and found by the examiner. Physical signs in the ear are important and the audiogram is helpful in diagnosing malfunctioning of the Eustachian tubes. When good ventilation of the middle ear cavity cannot take place there is absorption of the contained air and the pressure becomes less than atmospheric. The tympanic membrane tends to retract, the short process becomes more prominent, the light cone diffuses and the membrane thickens. In the middle ear cavity mucosal edema and hyperemia occur. If the process continues, mucosal hyperplasia and fibrosis finally result to cause irreversible damage.

The audiogram is helpful but not conclusive in selecting a patient for irradiation. The early cases show a relatively flat curve of tone loss with a greater loss for high tones. Tuning fork tests should reveal good bone conduction and usually the Rinne is negative.

### *Pathology*

There is a scarcity of information on the amount of lymphoid normally found along the Eustachian tube itself. Investigators[7, 8] have concluded that only seldom do lymphoid nodules occur as peripheral as the isthmus and usually their presence is pathological. It could therefore be concluded that obstructive lymphoid tissue occurs usually at the nasopharyngeal end of the Eustachian tube. It is a natural sequence for lymphoid tissue to hypertrophy in the nasopharynx as a result of upper respiratory infections, and in chronic infection nodules may occur anywhere along the tube. With the nasopharyngscope, discrete nodules can be seen at the ostium and suspected in the cartilaginous portion.

In recognition that the offending lymphoid hypertrophy is usually superficial in the nasopharynx, it would seem that superficial irradiation would be that of choice.

### *Types, Choice and Effects of Irradiation*

The radiation emitted by radium and its disintegration products are alpha, beta and gamma rays. The alpha rays are nuclei of helium atoms and are the most intense, but travel only one-tenth the speed of light and

consequently have very little penetrating power. They cannot penetrate tissue. Any metal container for radium is sufficient to block all alpha rays so the use of alpha rays in therapy is negligible or entirely absent.

Beta rays are electrons which travel practically at the speed of light. The average energy is about one-tenth that of alpha rays but, because of the smaller mass and higher velocity, the penetrating power is much greater. About 75 per cent of these are absorbed in 3 mm. of tissue and 93 per cent are absorbed in 10 mm. of tissue[5c].

Gamma rays are electromagnetic radiation with about the same wave length as x-rays. The velocity is that of light and their power of penetration is much greater than alpha or beta radiation[9].

Through recent years thousands of patients have been treated for lymphoid hypertrophy of the nasopharynx by irradiation. At first the advocates of radium depended chiefly upon the use of gamma rays and a few continue to do so by choice[7 10]. Many recommend the use of, and still use, roentgen irradiation so as to cover the entire length of the Eustachian tube[2 6 11 12]. A few physicians[17 18] decide upon each case individually whether to use radium or roentgen, and some[19] use a combination of the two. It appears from the literature that the majority of otologists and radiologists employ chiefly the beta rays of radium for intense superficial irradiation[5 13 14 15 16 20].

Argument for or against radium or roentgen irradiation is not convincing, but all investigators report generally satisfactory results from the use of irradiation in one form or another. We have found no adverse reports from the judicious use of either type and have confined our work to the predominant use of beta irradiation.

The effects of irradiation on the lymphoid tissue is that of any type cellular injury. There is not a grossly destructive injury, but the germinal centers are affected and mitosis and cell division are brought to a halt. The cellular protoplasm becomes granular and, although the cell is not destroyed, its reproduction is prohibited.

In cases of hypertrophied or infected tonsils and adenoids, surgery is first indicated. If a hearing defect persists and lymphoid obstruction is present, irradiation should be given. Investigators are unanimous in reporting best results in children under fifteen years of age with early or only slight hearing loss.

*Technic and Dosage*

The technic and dosages are the same for children or adults. The nose should be sprayed with a vasoconstrictor with or without local anesthesia. It is more comfortable usually for the patient to lie on a cot. The applicator is placed in the side of the nose to be treated and inserted posteriorly until the posterior pharyngeal wall is touched by the end of the applicator; it should then be pulled back anteriorly 2 or 3 mm. and the handle pulled toward the opposite side of the nose so the radium capsule will be as close as possible to the Eustachian tube. The maximum irradiation comes from the sides of the capsule and not from its ends. Adhesive tape is helpful in holding the applicator in place. If two applicators are available they can be used simultaneously.

The present dosage which has been determined by continued study and experience is 12 minutes to each side of the nasopharynx affected. To describe a treatment completely, one should include the amount of radium or radon, the filtration, the duration of application and the distance of application. The applicator with 0.3 mm. Monel metal filtration containing 50 mg. of anhydrous radium sulfate emits approximately 75 per cent beta rays and produces approximately 2860 r. at 1 mm. depth of lymphoid tissue when left in place 12½

minutes[5d 22].

The usual course is four treatments, each about two weeks apart. This usually requires six weeks, but a treatment should be postponed if the patient has a head cold. A period of observation for results should extend for four to six months following the last treatment.

Although the literature does not report cases of overexposure or untoward results, these should be considered. We must remember that irradiation can do more harm than good through improper use. Radium treatments of the nasopharynx are calculated as to relieve symptoms and not remove all visible lymphoid tissue. We should learn if the patient has received irradiation previously. Possible dangers of overirradiation are a dry uncomfortable nasopharynx, collections of mucus and crusts and even the occurrence of malignant changes.

The safest factor for the personnel administering treatments is distance. The intensity of the radiation varies inversely with the square of the distance. The radium applicator should not be handled but taken from the container and inserted directly into the patient's nasopharynx. When the instrument has been secured in place the physician and nurse should remain at least 25 feet distance. Overirradiation daily will produce a drop in the white blood count, particularly of the lymphoid cells. Beta rays would hardly reach office personnel and one-tenth an r. of gamma radiation each day is believed without accumulative effect[5c]. In treating several patients each day, and exercising precaution, the body would not be exposed to much more than half this safe amount. Each doctor or nurse employed in these treatments, however, should have cell counts made every two months.

*Summary*

The results of irradiation have been consistently favorable. The general average of success by otologists in the United States is about 70 per cent; our percentage is 66. We have 35 patients under treatment with the 3 mm. Monel metal applicator, but only 18 have received three or more treatments and should be reported here.

We believe irradiation to be definitely indicated when lymphoid tissue obstructs the Eustachian tubes. No ill effects have been seen from the use of the 0.3 mm. Monel metal applicator in 119 aerotitis cases treated by one of us (B.E.C.) while in the Army Air Force, or 35 nasopharynx cases in private practice. Eighteen cases with hearing impairment caused by lymphoid hypertrophy obstructing the Eustachian tube have received full treatment during the past year. Of these impaired hearing cases, 66 per cent are improved more than 15 DB.

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# CARCINOMA OF THE CORPUS UTERI

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Carcinoma of the corpus uteri is one of the major types of cancer occurring in women. Eighty-eight patients with this disease have been seen in the Robert Winship Memorial Clinic at Emory University Hospital. Eight of these patients were examined but not treated, either because they had already been treated elsewhere and simply came in for follow-up examination, or because they were referred for an opinion regarding the proper method of treatment, or because they were so advanced that no treatment would be of any value. The remaining 80 patients were treated by members of the staff of Emory University Hospital, and it is with these that the following study is concerned. All cases have been verified by examination of endometrial tissue in the pathologic laboratory and all have been traced.

Carcinoma of the corpus uteri is also referred to as carcinoma of the body of the uterus, carcinoma of the fundus and carcinoma of the endometrium. It develops when malignant changes occur in the endometrium, giving rise to adenocarcinoma in most instances, and in a few cases to adenoacanthoma, in which squamous as well as glandular elements are present. The relation of estrogen stimulation has been discussed several times in medical literature, but its exact role has yet to be clearly defined. The fact that carcinoma of the endometrium has occurred in patients who have had an artificial menopause several years previously as a result of either radiation or surgery would seem to indicate that estrogen stimulation is not essential, as would the fact that most cases occur in the postmenopausal period. On the other hand, the occasional finding of carcinoma of the endometrium coincident with granulosa-cell tumor of the ovary, in which a state of hyperestrogenism is produced, suggests that estrogen may be a factor. Novak has suggested that endometrial hyperplasia may predispose to carcinoma, but Fahlund and Broders studied 236 postmenopausal uteri, of which 86 contained carcinoma, and found a higher incidence of atrophic endometrium in adenocarcinomatous uteri than in noncarcinomatous uteri. After reviewing the literature on the subject, one is forced to conclude that convincing evidence is still wanting and that the role of estrogens in the origin of endometrial carcinoma is not yet completely understood.

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### *Diagnostic Features*

Postmenopausal or intermenstrual bleeding is the most important symptom of carcinoma of the corpus uteri. It occurred in 91 per cent of our cases. It is important to note, however, that bleeding of this type is not always present in this disease. In 4 of our cases there was no abnormal uterine bleeding, and in 3 menorrhagia was the only abnormality noted. In the patients who had no abnormal uterine bleeding, as well as in many others, a vaginal discharge was found to be present. It was usually thin and watery in nature. The postmenopausal and intermenstrual bleeding was seldom profuse, and in many instances only slight staining or spotting occurred. Pain was present in 25 per cent of the cases and, when

correlated with the patient's subsequent course, was found to be of definite prognostic significance. The patients without pain did nearly twice as well as those who complained of pain when first seen. Pain in the lower abdomen and legs was particularly suggestive of extension of carcinoma beyond the uterus. Although most frequent in the fifth decade, carcinoma of the endometrium may occur much earlier in life. The youngest patient in this series was 27 years of age.

In order to establish the diagnosis of carcinoma of the corpus uteri, representative tissue must be obtained and subjected to microscopic examination. This means that a diagnostic curettage is usually essential. Occasionally this can be done with a suction curet as an office procedure, but in most instances a currettage under anesthesia is employed. Even this, in rare instances, may fail to reveal the disease, as one case in our experience demonstrated, and repeated curettage should be done if symptoms persist. It is our impression that curettings fixed by frozen section are less apt to be satisfactory for diagnostic purposes than are those embedded in paraffin. Although the cytologic smear is an added diagnostic aid, we do not believe that it can be relied upon as the only basis for microscopic diagnosis. It should serve simply as an indication for curettage if suspicious cells are seen in the smear. The experience of a group working at the Free Hospital for Women in Boston indicates that the incidence of incorrect diagnoses by vaginal smear is definitely higher for carcinoma of the endometrium than it is for carcinoma of the cervix. Three of 18 cases of fundus carcinoma were missed by the vaginal smear, whereas they were later proved at operation to have carcinoma. This is an error of 16.6 per cent, and demonstrates the fallacy of relying on smears for diagnosis.

The fact that many women with carcinoma of the endometrium also have fibromyomas makes clinical diagnosis prior to biopsy difficult, and may lead to grave therapeutic error if the patient's symptoms are assumed to be due to the fibroids, without first ruling out the possibility of carcinoma of the endometrium. In our series one third of the patients had fibromyoma as well as carcinoma of the endometrium. This percentage, however, is not above that usually given for the incidence of fibromyoma in women over 40. Siddall recently studied the relationship of leiomyofibroma of the uterus and endometrial carcinoma in a series of 2,246 consecutive abdominal hysterectomies. In this series there were 1,672 myomatous uteri, and 574 uteri without fibroids. Siddall found the incidence of carcinoma to be less in the myomatous uteri than it was in the other group. It is rather generally agreed that fibromyoma does not play an etiologic role in the development of carcinoma of the endometrium. Since they occur together so frequently, however, one must be on guard lest the readily palpable fibroids be assumed responsible for symptoms actually caused by a small carcinoma in the endometrium. It is our belief that a curettage should be done routinely before hysterectomy for fibromyoma.

The clinical extent of carcinoma at the time of initial examination is sometimes difficult to determine. The uterus may be entirely normal in size, or it may show varying degrees of enlargement. The enlargement, however, may be due to fibromyoma rather than extension of the carcinoma. It follows that a large uterus does not necessarily mean a large carcinoma; as a matter of fact, it usually means associated fibromyoma. Extension beyond the uterus occurs later in carcinoma of the corpus than in carcinoma of the cervix, no doubt due to the restraining action of the thick muscular wall of the uterus. Because

of this, many patients with carcinoma of the corpus uteri come to their physicians while in a stage of their disease which can be favorably influenced by modern methods of treatment in a relatively high percentage of cases. Extension beyond the uterus may occur as a result of invasion through the uterine wall and the surrounding structures or as a result of metastases to the ovaries, regional lymph nodes, vaginal wall or to distant sites. Pelvic examination should include visualization of the cervix as well as palpation of the uterus and adnexae, and should be supplemented by a rectal examination. Visualization of the cervix in a good light may reveal evidence of cervical cancer as the cause of the vaginal bleeding, and rectal examination is most helpful in determining the presence and extent of parametrial involvement. As might be expected, clinical extent of disease bears a direct relation to end result.

### *Pathology*

Adenocarcinoma, grades I to IV, was found to be present in 77 of the 80 cases in this series. There was a direct correlation between the histologic grade of the tumor and the end result. The cases with adenocarcinoma, grade I, had the most favorable outcome, while those with grade IV did about half as well. The results from grades II and III were found to lie between these two extremes. Two cases showed adenoacanthoma on microscopic examination, and in one case adenocarcinoma and myosarcoma were found to be coexistent. This later finding is a relatively rare one. Hennessey recently reviewed the literature and found 28 reported cases.

### *Treatment and Results*

The experience of many competent physicians has demonstrated that better results can be obtained in the treatment of carcinoma of the corpus uteri by a combination of radiation therapy and complete abdominal hysterectomy, including bilateral salpingo-oophorectomy, than by any other method. Although in earlier years hysterectomy without radiation was considered adequate, the reports of such men as Healy, Ward and Corscaden of New York, Novak of Baltimore, Miller of Ann Arbor, Pemberton of Boston, Scheffey of Philadelphia, and Arneson of St. Louis, based upon a wide clinical experience, indicate a definite improvement in results when preoperative radiation is given. In a review of 707 cases from the literature, Corscaden found the 5-year survival after surgery alone to be approximately 60 per cent. Arneson reviewed 927 cases from the literature and found a 57 per cent 5-year survival after surgery alone. The results following a combination of radiation and surgery vary somewhat, but for the most part show a significant improvement over the results of surgery alone. (Corscaden, 72 per cent; Miller, 77 per cent; Healy and Brown, 75 per cent; Arneson, 79 per cent; and Scheffey, 89 per cent.) In our series 79 per cent of 19 patients treated over 5 years ago by preoperative radiation plus panhysterectomy have remained free of any evidence of carcinoma for 5 years or more.

In a group of 15 cases which received what seems to us to be the preferred method of treatment, the results are even better. Thirteen, or 86.7 per cent, of these cases have survived 5 years or more without evidence of recurrent carcinoma. In these cases 50 milligrams of radium were placed within the uterine cavity at the time of diagnostic curettage. The radium had a filtration equivalent to one half millimeter of platinum and was equally divided between 3 capsules placed in tandem formation. If microscopic examination confirmed the presence of carcinoma, the radium was left in place for 72 to 80 hours, giving a dose of 3600 to 4000 milligram hours. After completion of ra-

dium therapy, the patient received divided dose 200 kv. x-ray treatment through 2 anterior and 2 posterior pelvic ports. The target skin distance was 70 centimeters, the filtration one half millimeter of copper and one millimeter of aluminum, and the dosage 300 r to one port daily for the first pelvic cycle, and then to 2 pelvic ports daily until the total of 1500 r to each of 4 ports was reached. Four to 6 weeks later a complete abdominal hysterectomy was done, at which time the uterus, including the cervix, a cuff of vagina, and both tubes and both ovaries, were removed. This is our present preferred method of treatment.

The most reasonable explanation for the improvement in end results when surgery is preceded by radiation therapy is that the cancer cells are either completely destroyed or partially devitalized by the radiation and that recurrence in the pelvis at the operative site is therefore less likely to occur. It is also possible that small groups of cells outside of the uterus in the pelvis which have not yet given rise to clinically demonstrable metastases may be destroyed by the radiation measures. There is also no question but that local infection is markedly reduced by the preoperative radiation and that the size of the tumor shows marked diminution, and in approximately 50 per cent of the cases complete disappearance.

The effect of the preoperative radiation can be determined by careful examination of the uterus after panhysterectomy. This was done in 36 of our cases, and in 18 of these, or 50 per cent, there was no residual carcinoma which could be detected by gross or microscopic examination. Viable cancer cells were found in the remaining 18 cases, but in most of these there had been very marked reduction in the size of the carcinoma, and in some residual carcinoma was found microscopically when not suspected grossly. The dosage of radium as well as the technic of its application bears a definite relation to the per cent of cases showing residual carcinoma. The work of Heyman, and evidence recently submitted by Arneson, indicates that the use of multiple radium capsules in the uterus, rather than the radium tandem more commonly used, may give even better results. In Arneson's experience with 19 cases treated in this manner, the carcinoma appeared to be completely destroyed in 85 per cent when the uterus was subsequently examined following hysterectomy.

Not all cases of carcinoma of the corpus uteri are technically operable due to the extent of the carcinoma, and others, although technically operable, are such poor operative risks due to intercurrent disease or poor general condition, that the treatment must be limited to radiation alone. Our 5-year results in 17 cases so treated revealed 7 cases or 41.2 per cent free of carcinoma for 5 years or more. Pemberton reports a 45 per cent 5-year salvage in a similar group, and Healey and Brown report 39 per cent in 96 cases treated by radiation alone.

When radium and x-ray are the sole measures of treatment, Taylor and Becker advocate a routine curettage 4 months after completion of treatment, with a second application of radium if any evidence of residual carcinoma is found. Certainly at the first symptom suggesting recurrent disease, a curettage should be done and the patient retreated. Supplemental treatment will not infrequently bring about definite clinical improvement with control of the carcinoma for very significant periods, sometimes passing the 5-year mark.

A careful follow-up is essential in carcinoma of the corpus uteri as it is in other types of cancer. The patient is re-examined every 2 months during the first 2 years, and then at gradually increasing intervals until 5 years have passed, following which the

patient is seen once a year, or more often if any pelvic symptoms arise. At the time of follow-up examination attention is given not only to the operative site and abdomen, but also to the vaginal wall, since carcinoma of the corpus is known to metastasize to that area and to the left supraclavicular nodes since metastases can and do occur in this region. Metastases to bone are infrequent but do occur, and solitary metastases to the brain have been reported. A generalized carcinomatosis may also develop. Radiation treatment of recurrent disease in the pelvis and vaginal wall have proved to be of definite value. Palliation only may be expected from treatment of distant metastases.

### *Complications*

There was one postoperative death from peritonitis, following panhysterectomy; and one postoperative death from cerebral hemorrhage, following diagnostic curettage and insertion of radium. Two deaths occurred during courses of x-ray therapy, one from a pulmonary embolus and one from a coronary occlusion. Three cases developed pyometrium, which subsided following drainage through the cervical canal. There was one incisional hernia. There was no severe radiation damage to bowel or bladder and no fistulas which could be attributed to radiation. There were no complications in 73 of the 80 patients treated.

### *Summary*

1. Postmenopausal or intermenstrual bleeding should at once suggest the presence of carcinoma of the corpus uteri, even though the patient has a readily palpable fibromyomatous uterus. These two conditions are frequently coincidental, though apparently not etiologically related. A diagnostic curettage should be done routinely before hysterectomy for fibromyoma.

2. Abnormal uterine bleeding is the most frequent symptom of carcinoma of the corpus uteri, but does not always occur. Vaginal discharge was present in 4 cases in this series which did not have abnormal bleeding, as well as in many others. Pain is a symptom of definite prognostic value and the end results of the patients who complain of pain at the time of first examination are approximately one-half as good as those in patients who do not have pain.

3. A combination of preoperative intrauterine radium, 3600 to 4000 milligram hours, and preoperative x-ray, followed by complete abdominal hysterectomy with bilateral salpingo-oophorectomy offers the best chance for cure of this disease. Of 15 patients who received this type of treatment over 5 years ago, 13 or 86.7 per cent have survived 5 years or more without evidence of carcinoma. This is appreciably above the 60 per cent 5-year survival rate for surgery alone.

4. Radiation alone has definite therapeutic value for those cases which cannot be subjected to subsequent panhysterectomy. The 5-year survival rate in this series for patients treated by radiation alone is 41.2 per cent.

5. The risk of major complications from the recommended therapeutic measures is not great, and the over-all outlook for the patient with carcinoma of the corpus uteri is favorable.

Table 1—*Relation to Menopause*

| | |
|---|---|
| Before | 12 (15%) |
| During | 3 (3.8%) |
| After | 65 (81.3%) |

Average age at menopause 48.5 years.

Table 2—*Abnormal Uterine Bleeding*

| | |
|---|---|
| None | 4 |
| Menorrhagia | 3 |
| Intermenstrual | 12 |
| Postmenopausal | 61 |

Table 3—*Pathology*

| | No. | Free of Ca. at Present |
|---|---|---|
| Adenocarcinoma, grade I | 6 | 6 ( 100%) |
| Adenocarcinoma, grade II | 22 | 18 (81.8%) |
| Adenocarcinoma, grade III | 23 | 16 (69.6%) |
| Adenocarcinoma, grade IV | 4 | 2 (50 %) |
| Adenocarcinoma, not graded | 22 | 10 (45.5%) |
| Adenoacanthoma | 2 | 1 (50 %) |
| Adenocarcinoma and Myosarcoma | 1 | 0 ( 0%) |

Table 4—*Residual Carcinoma in Uterus*

| Preop. Radium Dosage | No. | Residual Ca. | No. Residual Ca. |
|---|---|---|---|
| Under 3000 mg. hrs. | 4 | 2 (50%) | 2 (50%) |
| 3000 mg. hrs. | 3 | 2 (66.6%) | 1 (33.3%) |
| 3600 mg. hrs. | 14 | 8 (57.1%) | 6 (42.9%) |
| 4000 mg. hrs. | 15 | 6 (40%) | 9 (60%) |
| Total | 36 | 18 (50%) | 18 (50%) |

Table 5—*Preferred Method of Treatment*

Radium (3600-4000 mg. hrs.), X-ray (1500-1800 to 4 ports), Panhysterectomy.

| | No. | Free of Ca. 5 Yrs. | Died of Ca. |
|---|---|---|---|
| Uterus not enlarged | 4 | 4 (100%) | 0 |
| Uterus enlarged but not over 10 cm. | 9 | 8 (88.8%) | 1 |
| Uterus over 10 cm. but movable | 1 | 1 (100%) | 0 |
| Extension beyond uterus | 1 | 0 (0%) | 1 |
| Total | 15 | 13 (86.7%) | 2 |

Table 6—*Complications*

| | |
|---|---|
| Death following Panhysterectomy (Peritonitis) | 1 |
| Death following D. and C. and radium (cerebral hemorrhage) | 1 |
| Death during x-ray therapy (Pulmonary embolus—1, Coronary occlusion—1) | 2 |
| Pyometrium | 3 |
| Incisional hernia | 1 |
| No complications | 72 |

Table 7—*Five Year Results*

| | No. | No Evidence of Disease |
|---|---|---|
| Uterus not over 10 cm. in diameter | 28 | 20 (71.4%) |
| Radiation plus Panhysterectomy | 16 | 14 (87.5%) |
| Radiation alone | 12 | 6 (50%) |
| Uterus over 10 cm. but movable | 4 | 2 (50%) |
| Radiation plus Panhysterectomy | 2 | 1 (50%) |
| Radiation alone | 2 | 1 (50%) |
| Extension beyond uterus | 6 | 0 (0%) |
| Radiation plus Panhysterectomy | 1 | 0 (0%) |
| Radiation alone | 3 | 0 (0%) |
| Radiation plus Exploratory laparotomy | 2 | 0 (0%) |
| Total | 38 | 22 (57.9%) |

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# SOME FEATURES OF THE CHEMISTRY OF CANCER OF THE BREAST

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This work was begun with the thought of locating some chemical substance in the breast which might act here like radioactive iodine in cancer of the thyroid gland. At one time I theorized that there might be a decided change in the *pH* of an area which was conducive to the development of cancer, the idea being that in the effort to correct this status in the *pH* potassium would escape from the cell to support the sodium in the adjacent intercellular tissue to effect a correction of the *pH*.

In the study of a rather cellular tissue, as the tonsil, we find the following:

Specimen No. 33
*Tonsil, Non-Malignant*
Dried. Constant weight 0.702 Gm.

| | |
|---|---|
| P | 4.7 mg. per 1 gram of tissue. |
| K | 18.6 mg. per 1 gram of tissue. |
| Ca | 0.87 mg per 1 gram of tissue. |
| Na | 52.9 mg. per 1 gram of tissue. |
| Mg | 0.45 mg. per 1 gram of tissue. |

Specimen No. 34
*Tonsil, Non-Malignant*
Dried. Constant weight 0.82 Gm.

| | |
|---|---|
| P | 3.04 mg. per 1 gram of tissue. |
| K | 4.04 mg. per 1 gram of tissue. |
| Ca | 0.69 mg. per 1 gram of tissue. |
| Na | 27.1 mg. per 1 gram of tissue. |
| Mg | 4.2 mg. per 1 gram of tissue. |

Specimen No. 31
*Diffuse Carcinoma of the Breast*
Dried. Constant weight 0.291 Gm.

| | |
|---|---|
| P | 2.3 mg. per 1 gram of tissue. |
| Ca | 1.88 mg. per 1 gram of tissue. |
| Na | 21.0 mg. per 1 gram of tissue. |
| Mg | No reaction. |

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Specimen No. 30

*Diffuse Carcinoma of the Breast*

Dried. Constant weight 0.59 Gm.

| | | |
|---|---|---|
| P | 4.8 | mg. per 1 gram of tissue. |
| K | 1.52 | mg. per 1 gram of tissue. |
| Ca | 1.9 | mg. per 1 gram of tissue. |
| Na | 51.0 | mg. per 1 gram of tissue. |

Specimen No. 36

*Carcinoma of the Breast, Scirrhous Type. No axillary involvement.*

Dried. Constant weight 0.77 Gm.

| | | |
|---|---|---|
| P | 1.4 | mg. per 1 gram of tissue. |
| K | 1.62 | mg. per 1 gram of tissue. |
| Ca | 1.00 | mg. per 1 gram of tissue. |
| Na | 5.8 | mg. per 1 gram of tissue. |
| Mg | 0.32 | mg. per 1 gram of tissue. |

Specimen No. 35

*Epidermoid Carcinoma, Squamous Cell Type, Grade 1*

| | | |
|---|---|---|
| P | 2.2 | mg. per 1 gram of tissue. |
| Ca | 1.4 | mg. per 1 gram of tissue. |
| Na | 8.37 | mg. per 1 gram of tissue. |
| Mg. | 0.71 | mg. per 1 gram of tissue. |

Specimen No. 32

*Scirrhous Carcinoma of the Breast.*

Dried. Constant weight 0.135 Gm.

| | | |
|---|---|---|
| P | 2.9 | mg. per 1 gram of tissue. |
| K | 1.0 | mg. per 1 gram of tissue. |
| Ca | 1.3 | mg. per 1 gram of tissue. |
| Na | 16.3 | mg. per 1 gram of tissue. |
| Mg | 1.4 | mg. per 1 gram of tissue. |

Specimen No. 27

*Adenocarcinoma of the Breast, Grade 2, Somewhat Radiosensitive.*

Dried. Constant weight 0.922 Gm

| | | |
|---|---|---|
| P | 4 | mg. per 1 gram of tissue. |
| K | 2.55 | mg. per 1 gram of tissue. |
| Ca | 0.77 | mg. per 1 gram of tissue. |
| Mg | 0.14 | mg. per 1 gram of tissue. |

Specimen No. 25.

*Adenocarinoma of the Breast, Grade 2, Rather Radioresistant, No Lymph Node Involvement.*

Dried. Constant weight 0.845 Gm.

| | | |
|---|---|---|
| P | 0.8 | mg. per 1 gram of tissue. |
| K | 2.72 | mg. per 1 gram of tissue. |
| Ca | 1.2 | mg. per 1 gram of tissue. |
| Na | 6.6 | mg. per 1 gram of tissue. |
| Mg | No reaction. | |

Specimen No. 26

*Adenocarcinoma, Grade 2, Radiosensitive.*

Dried. Constant weight 0.365 Gm.

| | | |
|---|---|---|
| P | 1 | mg. per 1 gram of tissue. |
| K | 2.53 | mg. per 1 gram of tissue. |
| Ca | 1.34 | mg. per 1 gram of tissue. |
| Na | 9.2 | mg. per 1 gram of tissue. |
| Mg | 0.63 | mg. per 1 gram of tissue. |

Specimen No. 18.

*Diffuse Carcinoma of the Breast. Radiated.*

| | | |
|---|---|---|
| P | 0.585 | mg. per 1 gram of tissue. |
| K | 0.25 | mg. per 1 gram of tissue. |
| Ca | 2.5 | mg. per 1 gram of tissue. |
| Na | 51.5 | mg. per 1 gram of tissue. |
| Mg | 0.705 | mg. per 1 gram of tissue. |

Specimen No. 20.

*Carcinoma of the Breast. Radiated. Preoperative.*

| | | |
|---|---|---|
| P | 0.605 | mg. per 1 gram of tissue. |
| K | 1.25 | mg. per 1 gram of tissue. |
| Ca | 0.336 | mg. per 1 gram of tissue. |
| Na | 31.35 | mg. per 1 gram of tissue. |
| Mg | 0.015 | mg. per 1 gram of tissue. |

Specimen No. 21.

*Diffuse Carcinoma of the Breast, Grade 2 to 3. Radiosensitive.*

| | | |
|---|---|---|
| P | 7.3 | mg. per 1 gram of tissue. |
| K | 3.96 | mg. per 1 gram of tissue. |
| Na | 5.3 | mg. per 1 gram of tissue. |
| Ca | 0 946 | mg. per 1 gram of tissue. |
| Mg | No reaction. | |

Specimen No. 37

*Diffuse Carcinoma of the Breast.*

Dried. Constant weight 0.4 Gm.

| | | |
|---|---|---|
| P | Not indicated. | |
| K | 3.28 | mg. per 1 gram of tissue. |
| Ca | 3.44 | mg. per 1 gram of tissue. |
| Na | 10.19 | mg. per 1 gram of tissue. |
| Mg | No reaction. | |

Specimen No. 39.

*Scirrhous Carcinoma of the Breast. Upper Outer Quadrant. Metastasis to Axillary Lymph Nodes.*

Dried. Constant weight 0.845 Gm.

| | | |
|---|---|---|
| P | 6.4 | mg. per 1 gram of tissue. |
| K | 3.52 | mg. per 1 gram of tissue. |
| Ca | 1.04 | mg. per 1 gram of tissue. |
| Na | 5.2 | mg. per 1 gram of tissue. |
| Mg | No reaction. | |

So far as the *pH* of the tissue is concerned, I believe no logical conclusion can be deducted. Probably the one finding which commands attention is the Mg. Its absence in so many cases makes further study advisable.

The radioisotopes of Mg 23 and Mg 27 are very short lived, so that for therapeutic purposes they are valueless since Mg 23 has a half life of 11.6 seconds and Mg 27 9.6 minutes.

At the present time I am not certain whether the electromagnetically concentrated isotopes 24, 25 and 26 can be used in the treatment of cancer. I am unable to say. This is matter for further investigation.

The thought occurred to one that the diminution of the Mg content in the breast cancer might make the substance suitable as a carrier of the radiation of the cancer tissue in the breast. This thought originated in the now generally used radioactive iodine in the treatment of cancer of the thyroid.

## DISCUSSION

The following discussion includes also the papers by Drs. Osler Abbott and Wm. A. Hopkins; by Dr. Glenn J. Bridges; and by Drs. Ralph H. Chaney and Robt. B. Greenblatt, which were published in the November, 1948, number of this JOURNAL.—ED.

DR. E. N. MANER (Savannah): I will discuss only Dr. Collins' paper, which he has presented so thoroughly and delightfully. Through the literature I find no adverse criticism on radium irradiation. In the treatment

of children, I think Dr. Collins' results compare favorably with those reported by many other writers and from my own experience I think 65 or 70 per cent have improved.

Dr. Collins didn't mention the other uses of radium, which I find quite beneficial in cases of bronchitis, and chronic rhinitis. Several of these patients with so-called hay fever or allergic rhinitis that I have treated have shown marked improvement over a period of a year or more, and to some I have given the second treatment.

In Dr. Collins' paper he discusses only the effect on deafness and I think he will probably find that his histories will show that many of these children were also sufferers of bronchial asthma.

Dr. Collins also says in his paper that of course deafness may be the result of chronic recurrent colds which result in hypertrophy of this tissue, but I wonder if maybe the hypertrophy is not the cause of the recurrent colds, or otitis media. It seems to me that in these cases a deafness, as a result of recurrent lymphoid tissue as reported by Crowe, takes place in about 75 per cent of the children operated on under 12 and also that approximately 50 per cent of these children will develop impairment of hearing to some degree.

As to the method of application, it is simple. Dr. Collins explained the procedure, placing the applicator in the side of the nose until the posterior pharyngeal wall is touched by the end of the applicator, then pulled back anteriorly toward the opposite side of the nose so the radium capsule will be as close as possible to the Eustachian tube. I have had patients turn their heads so that the end of the applicator helps to press the capsule against the ostium and in close proximity to the modiolus there.

As you know, of course, in doing tonsils and adenoids we often see these cases with lymphoid tissue at the time of operation, and since I have been using radium and have seen some of them have complications that follow, I often explain to the parents of the child that I think it would be well to give him or her irradiation shortly after the recovery from the operation. In that way I hope to prevent some of these sequellae.

As to the question of advantages of irradiation over x-ray, there probably is, as Dr. Collins' chart shows, very little difference in the results from irradiation and x-ray, but I think the problem comes in having a radiologist that will treat your small children; that is, children two years old or less, with x-ray. I know that in my city it is very difficult to get our radiologists to handle a two or three year old child. The child doesn't lie still on the table and doesn't cooperate, and they say they can't do anything about this thing. In that way, I certainly think it is an important adjunct, and it gives the otologist something to do. He does not have to rely entirely upon x-ray in the treatment of these cases.

DR. J. A. REDFEARN (Albany: I want to say a few words concerning Drs. Abbott's and Hopkins' paper. I notice they did not include in the age group those under 20. I wish, first of all, to emphasize the importance of having x-ray films in pneumonia. It is so simple to treat the average case of pneumonia that we neglect this important thing.

A case I want to call to your attention was a healthy, well-developed young white girl, aged 12, whom I saw in consultation three months after a diagnosis of pneumonia. The only symptom that was complained of was low-grade fever. Low-grade fevers we have with us always, it seems, and they are quite puzzling at times. The child had not had an x-ray examination of the chest and that, among other things, was done, and in an upper lobe there was an area of increased density of about 2-4 cm. The temperature range was from 99 to 100 degrees F. I suggested that it had been probably too long for this to be considered virus pneumonia and that penicillin would do no good in virus pneumonia, perhaps. With four days of penicillin and bed rest, the temperature was normal. The child was eating well so we had another film made on the fifth day. The abnormal shadow was the same size and the same density as noted on the first film. I suggested that she be taken back home and return to Albany in two weeks for another film. This time it was apparently the same size and the same density as on the other two films. A three weeks' delay was advised and in that time the lesion had doubled in size. The father and grandfather, who is a physician, and myself, held a conference and it was decided there were several places that the child could be sent and they asked me to telephone to a clinic in a distant city. When I explained this, the doctor said, "Well, unquestionably we are dealing with a cyst and that can be removed. I suggest that you send her right away", and in three days she was there. She went to the clinic and the x-ray films were taken along. Other x-ray films showed the size of the area redoubled in five days' time. The surgeon was sure then he was dealing with an infected cyst. He had six operations of the chest that morning and put this one off until the last, because unquestionably it must be an infected cyst. He operated on the girl and had a frozen sections of the tissue examined and found that it was an anaplastic epithelial tumor with metastases already to the chest wall. He did a pneumonectomy and the child was sent back and referred to the Steiner Clinic where she received two treatments. In two months she was dead.

The question I have uppermost in my mind since is—what do we mean by finding cancer early? I don't know. I don't believe we have a very clear-cut definition of that.

I enjoyed this paper very much and consider it an outstanding contribution to medical literature.

DR. WILLIAM A. HOPKINS (Atlanta): In closing the discussion I would like to thank Dr. Redfearn for his remarks concerning his case of carcinoma of the lung. It is certainly an unusual case and is not often seen in this age group; however, the youngest case reported in the literature was that of a child 18 months of age.

I am sure that I do not know at what stage in the progress of the disease we can call the diagnosis of bronchiogenic carcinoma an early diagnosis; that is to say, I do not know when an operable case becomes inoperable. We would like to see the cases earlier than the average of 11 months from the onset of symptoms.

I would like to emphasize again a point brought out by Dr. Abbott. This is the frequent occurrence of repeated pulmonary infection in cases of carcinoma of the lung. Seventy-six per cent of our cases, as well as a like figure throughout the literature, have had a repeated diagnosis of flu, virus pneumonia, and respiratory infection.

The x-ray, although it is a help in the majority of cases, is not always diagnostic and it may show the results of obstruction, plus infection distal to the carcinoma, and the tumor itself may be too small to be seen. This group of individuals represent a rather typical course of pneumonia at its onset, but as the disease progresses it is entirely atypical. I should like to urge in any respiratory infection, in which the diagnosis is made on an x-ray finding, that an x-ray also be taken at the termination of the patient's illness. We feel that the complete resolution of pneumonic process should be assured before the diagnosis of bronchiogenic carcinoma can be ruled out. We have often seen cases in which the clinical signs of the patient had improved but the x-ray findings were not changed.

# RUPTURED TUBAL PREGNANCY FOLLOWING PREVIOUS VAGINAL HYSTERECTOMY

Henry C. Frech, M.D.
*Savannah*

A review of the literature reveals many cases of pregnancy following tubal ligation[1 2 3 10]. Schultze[4] observed pregnancy after tubal resection of both tubes and amputation of the fundus. Liepman[5] reported it after supravaginal hysterectomy. McMillan and Dunn[5 7] reported two pregnancies in the same patient after supravaginal hysterectomy with excision of all of one tube and ovary and part of the other tube. Lasch[8] reported pregnancy in a woman who had both tubes, wedges from the uterine cornu, and one ovary removed. Brown and Shields[9] reported supracervical pregnancy following a supravaginal hysterectomy. Bunster[10] reported a case of pregnancy at term after a partial hysterectomy. Connors et al[11] reported a vaginal delivery of a six month living child four years after the patient had had a supravaginal hysterectomy performed. Weil[12] reported a case of ectopic pregnancy in a patient that had had a previous vaginal hysterectomy.

My case is reported because only one previous case of ruptured tubal pregnancy following a vaginal hysterectomy has been found in the literature.

*REPORT OF CASE*

Mrs. W. H. L., white, aged 32, nine years previously had a normal spontaneous delivery, but continued to bleed and have a very foul smelling vaginal discharge for two months following the delivery. Examination revealed an inversion of the uterus, and a Mayo type vaginal hysterectomy was done. The surgeon operating felt the case required drainage and so placed a one inch iodoform gauze in the culdesac at the time of operation. Recovery was uneventful.

On December 18, 1944, she complained of pain in the right lower abdominal quadrant, nausea, and vomiting. Her weight was 191 pounds, temperature 99.5 F., pulse rate 104, respirations 22, blood pressure 120 over 80. She was tender in the right lower abdominal quadrant and exhibited rebound tenderness and rigidity in this region. Pelvic examination revealed marked tenderness in the right fornix and no definite mass, but a feeling of fullness. The cervix and uterus were absent. The left adnexa appeared normal. Rectal examination revealed marked tenderness in the right side and a small sausage-shaped mass was palpable in the right side. The left side was normal. W. B. C. 19,000; differential: young form 2, band form 14, adult polys 72, total polys 88, lymphocytes 11, eosinophiles 1. R. B. C. 4,000,050; Hb. 85 per cent. Urinalysis was negative.

At operation the appendix was atrophic. There was free blood in the abdominal cavity and a mass in the right fallopian tube 4 cm. in diameter and about 3 cm. long. A right salpingectomy and appendectomy were performed.

The pathologic report by Dr. Lee Howard revealed the appendix to be atrophic without lumen and embedded in fat. There was a mass of dark molded blood clot 4 cm. in diameter, together with fragment of what appeared to be macerated tube 3 cm. long. Sections showed for two of the blocks the fimbriated end of a tube that was very vascular. The other blocks were also tubal tissue through which there were many blood channels and thick-walled blood vessels intermixed with organizing blood clot. There were some large syncytial-like cells and decidual cells. Diagnosis: ruptured tubal pregnancy.

The patient made an uneventful recovery, and thorough search by probing the vaginal vault revealed no demonstrable fistula in the suture line. She was last seen August 24, 1947, and has remained well.

An examination of the original operation in the cases reported in the literature shows the possibility for recanalization in two of them. In the case reported by McMillan and Dunn the cut end of the remaining tube had been stitched in with the peritoneum over the stump of the cervix. The cervical canal and the tube end may have been in apposition, a suture may have cut through the tube a few days after operation, or a small dead space may have invited epithelization. In the case of Lasch, the remaining ovary had been sutured against the uterine wall, apparently at the site of the removed wedge. A hematoma in the site from which the wedge had been removed would have furnished an excellent opportunity for the epithelium to finish the path from the uterus to the ovary[12].

Schultze[4] reported a case of a woman that had been supposedly sterilized by resection of the isthmic portions of the tubes. Conception took place about 15 months after the operation. On the left side continuity of the tube appeared to have been restored by a fistulous duct. Its epithelium was low, nonsecretory, without fimbriae, and partly formed by cells of the decidual type; and

masculature was not present. On the right side a fistulous duct was in the making; both stumps terminated in it but had not yet joined.

*Discussion*

The tendency of epithelium to connect with epithelium is well known. Carrington and Bullitt[13] reported a case of a 55 year old woman that might well have had an abdominal pregnancy after a total vaginal hysterectomy had she been younger. The wound healed with a small fistulous tract through the vaginal vault, the approximated pubocervical and uterosacral ligaments, broad and round ligaments forming a patent canal from the vagina to the peritoneal cavity that required six months of curetting and cauterizing to obliterate. There must have been an epithelization of the tube to the vagina in this case, even though such a tract could not be demonstrated.

*Summary*

A case of ruptured tubal pregnancy following vaginal hysterectomy has been described. A review of the literature revealed only one previously reported such case.

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## USE BLOOD PLASMA IN TREATMENT WITH DICUMAROL

Hemorrhage in persons who overreact to dicumarol, a drug which prevents blood from clotting, can be controlled by administering blood plasma, say three physicians from the Departments of Medicine and Surgery, Columbia University College of Physicians and Surgeons, and the Presbyterian Hospital, New York.

Writing in the October 9 issue of *The Journal of the American Medical Association*, Stuart W. Cosgriff, Richard J. Cross, and David V. Habif say that 20 to 25 per cent of persons who receive dicumarol as treatment for blood clots are "hyperreactors."

In these people the usual dose of the drug not only prevents the blood from clotting but also produces a dangerous condition in which hemorrhage may occur. Administration of blood plasma is immediately effective against this condition, the physicians point out.

## ISOLATION AND CULTIVATION OF THE DONOVAN BODIES OF GRANULOMA INGUINALE

CECIL R. REINSTEIN
ROBERT B. DIENST, Ph.D.
and
ROBERT B. GREENBLATT, M.D.
*Augusta*

During the past two years four strains of Donovan bodies have been isolated from patients with granuloma inguinale at the University of Georgia School of Medicine in Augusta. Methods of isolation from superficial granulomatous lesions in the yolk sac of developing chick embryos have been previously described[3,4]. The most recent strain isolated was from pus which had been aseptically aspirated from an inguinal swelling on a patient with advanced genital lesions. As this material contained Donovan bodies without the presence of contaminating organisms, its isolation was accomplished without the difficulties usually encountered with material from surface lesions. The attendant difficulties and the tedious nature of the procedures used to free the Donovan bodies from the variety of organisms which frequently contaminate superficial granulomatous lesions, limit the usage of isolation technic in securing material for research.

Few lesions encountered among the patients we have seen have been suitable for isolation. The choice of material has been determined by the presence of numerous Donovan bodies and minimal contamination as shown by direct smears. Inguinal lesions, in general, are more frequently suitable than are genital or perigenital lesions. Where few contaminating organisms are present, Donovan bodies may be isolated for

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Aided by a research grant from the United States Public Health Service.
Read at the nineteenth annual meeting of the Georgia Public Health Association, Savannah, May 12, 1948.

cultivation by one or a combination of several methods. Tissue removed under aseptic conditions is freed from attendant contaminants by washing in sterile solutions followed by division into fine bits of tissue which are further isolated by: (1) Additional repeated washings and resuspension in sterile solution, (2) Suspension and incubation in antibiotics, and (3) Incubation of small bits of tissue on sterile media and subsequent cultivation of those showing no bacterial growth. Subcutaneous transplantation of granulomatous tissue into a volunteer patient and aspiration of the resulting swelling prior to its rupture has also been used by us to obtain Donovan bodies in pure culture. Actual cultivation of the uncontaminated inoculum in the yolk sac of the developing chick embryo is a simple technical procedure. (The accuracy of the technic can be quite dramatically demonstrated by the inoculation of the yolk with a suspension of nigrosine. On opening the egg a few minutes later, the unbroken yolk will be found to be stained black while the white remains clear and normal).

*Cultivation*

Although primary isolation has only been accomplished to date by the use of the chick embryo method, *in vitro* culture methods are now available for the propagation of recently isolated strains of Donovan bodies[3,6]. Dienst has recently described such a media. This media contains a nutrient base with fresh yolk and a small percentage of agar added to satisfy the growth requirements of this extremely fastidious organism. Rake and his associates[7] recently reported a yolk free media on which they have obtained growth of the Anderson strain of Donovan bodies. *In vitro* culture allows a greater latitude of experimentation which may be expected to produce valuable knowledge for use in treatment and control of granuloma inguinale[8].

*Tissue Culture*

Tissue culture experiments were conducted utilizing minced embryonic chick heart, liver, spleen, stomach and brain in sterile Tyrode's solution. The original inoculums consisted of yolk culture rich in Donovan bodies. Embryonic heart and liver media supported growth while the other embryonic tissues did not. The organisms multiplied but grew feebly in liver media while embryonic heart media supported moderate to good growth. In tissue culture the organisms reached their maximum growth in 4 to 5 days after which the cultures rapidly deteriorated.

*Animal Experimentation*

Failure to produce lesions in experimental animals with contaminated and bacteria free tissue from granulomatous lesions of patients has been previously described by us and by others[1,9]. Additional attempts have been made using yolk cultures.

1. A series of 12 mice were inoculated intracerebrally with 0.05 cc. of yolk culture rich in Donovan bodies. These animals failed to show any symptoms of infection. A similar series of mice were sacrificed at intervals and impression smears and histologic preparations made of the brain. These slides showed no evidence of any multiplication of the Donovan bodies and the bodies lost their recognizable characteristics after 3 to 4 days.

2. A series of mice, guinea pigs and rabbits were inoculated intradermally and subcutaneously with massive doses of infective yolk. In each case the inoculum was absorbed without producing lesions or demonstrable evidence of infection. Additional experiments in mice also failed to give results with subcutaneous inoculation after production of trauma by crushing injuries of superficial tissues. Superficial inoculation of abraded skin surfaces met with no better success.

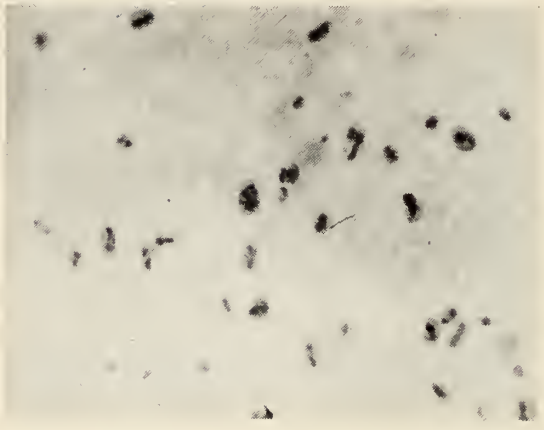


Figure 1
Donovan bodies in yolk sac smear of 13-day-old chick embryo 8 days after inoculation.

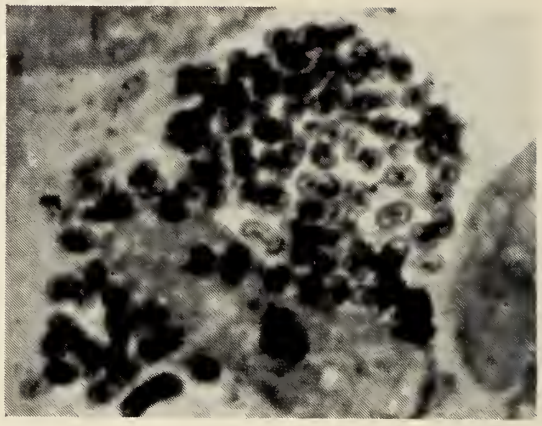


Figure 2
Tissue smear showing typical intramonocytic Donovan bodies.

3. Tuberculous involvement of inguinal lymph glands in guinea pigs was produced by the subcutaneous inoculation of a culture of *M. tuberculous*. Yolk cultures of Donovan bodies were inoculated intradermally over palpable lymph nodes and directly into the caseating lymph glands. Study of biopsied material from the glands and material secured at autopsy after 6 weeks showed no evidence of continued multiplication or the establishment of an infection by the Donovan body.

4. The medullary cavity of the femur of a rabbit was inoculated with 0.5 cc. of yolk culture and aspiration biopsies were made at intervals over a period of 60 days. No Donovan bodies were found in the marrow smears.

*The Laboratory and Diagnosis*

While complement fixation tests[1,5,6] and skin reactions[1,2] are available as diagnostic aids in suspected cases of granuloma inguinale, the demonstration of the characteristic, intracellular Donovan body in stained smear preparations offers the most feasible and specific confirmation of clinical findings. Choice of adequate material for the preparation, proper staining and careful examination by an experienced microscopist are essential for significant results.

Granulomatous lesions are always superficially contaminated and should be cleaned thoroughly before attempting to obtain a specimen. Tissue smears should be obtained from freshly granulating portions of the lesion. Adequate preparations may be made in the following manner: A small bit of tissue, no more than 2 cubic millimeters, is pinched between two slides. The tissue is ground between the slides with a rotary motion and the slides separated by pulling apart, thus making two smears. Smears made in this manner will often yield good results when specimens taken only of tissue exudate are unsatisfactory.

Slides stained by Wright's method are most satisfactory when the staining schedule used for routine procedures is slightly modified. The capsules are more deeply stained and the organism is more easily recognized if the dye is allowed to remain on the preparation for a minute and a half before dilution with water.

The presence of characteristic, intracellular Donovan bodies in diagnostic preparations constitute a positive finding. While some extracellular organisms may simulate the Donovan body in appearance, characteristic bodies in the large mononuclear cells are diagnostically specific.

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## NEW BOOKS

*Psychiatry in General Practice*, by Melvin W. Thorner, M.D., D.Sc., Assistant Professor of Neurology, University of Pennsylvania Graduate School of Medicine, 659 pages, 6x9 inches, illustrated.

New!—by writing about the people who develop symptoms—rather than about the symptoms themselves—Dr. Thorner has contributed one of the most usable books on the diagnosis and treatment of mental disorders ever written for the general practitioner. Here in this new book you will find an unusually simplified approach to the diagnostic problems encountered in mental cases. No elaborate terminology (so familiar to the academic psychiatrist) is included. Each situation is described in such self-explanatory language that even a layman could follow it with ease.

Treatment is, of course, the general practitioner's greatest problem with the mental patient—and Dr. Thorner gives you unwavering and specific advice on every phase of therapy. In chemotherapy, he gives you exact directions for administration and definite dosages. Physiotherapeutic methods (including the use of restraints and hydrotherapy) are considered. The chapter devoted to Shock and Related Therapy covers insulin, metrazol and electroshock, electronarcosis and prefrontal lobotomy. And in his chapter on Psychotherapy, Dr. Thorner gives you a number of helpful technics for talking to and listening to the patient. W. B. Saunders Company, Philadelphia and London, 1948. Price $8.00.

* * *

*A.M.A. Interns' Manual*, prepared by the councils and bureaus of the American Medical Association. Compiled and edited in the office of the council on pharmacy and chemistry. 201 pages, 4¼x7⅛ inches.

W. B. Saunders Company has been selected by the American Medical Association to carry on the publication of this popular Interns' Manual. It is believed that this is the handiest, most truly useful and authoritative little volume of its kind ever written.

The various councils and bureaus of the A.M.A. have brought all the data completely up-to-date. They have incorporated in this one ready-reference handbook—all the basic facts essential to hospital practice. Specific advice is given on the intern's place in the hospital, the lawful scope of his practice in each state, and the services of the A.M.A.

In concise form the manual covers the latest uses and dosages of 248 proven drugs, clinical data for use in common emergencies, today's standard tests, the diagnosis and treatment of acute poisoning, the technics of physical medicine, and normal and special diets. A number of valuable reference tables are included. Today's intern, resident and general practitioner will do well to keep a copy of this handy book close by for quick and expert advice. W. B. Saunders Company, Philadelphia and London, 1948. Price $2.25.

* * *

*Monograph On Leading Causes of Death.* Because of medical progress, accidental deaths nowadays cut off more working years from the life times of the American people than any one natural cause of death, the A.M.A. Bureau of Medical Economic Research reports in a new Bulletin, No. 64, a summary of which appeared in the October 16 issue of *The Journal*.

In a study of deaths for 1930, 1935, 1940 and 1945, Frank G. Dickinson, Ph.D., Director, and Everett L. Welker, Ph.D., associate in mathematics in the bureau, demonstrated also that even though heart disease kills 4½ times as many people as accidents, it does not destroy as many working years because the average age at death from heart diseases was 67 in 1945 and from accidents only 45. Heart diseases in 1945, however, destroyed twice as many "unrealized" years of complete life expectancy as did accidents. The authors call their two new measures life years lost and working years lost.

"Accidental deaths were seven per cent of all deaths in each of the four years studied," Dr. Dickinson said. "The upgrading of accidental deaths by working years lost is due to the increasing control of medical science over pneumonia and tuberculosis, both of which outranked accidental deaths by working years lost in 1930. The general reason for the upgrading of accidental deaths is the tremendous increase in the number of people who live on to the older ages instead of dying at the younger ages as would have been the case at the turn of the century."

* * *

*Congenital Malformations of the Heart*, by Helen B. Taussig, M.D., Associate Professor of Medicine, and Director of the Children's Cardiac Clinic at the Harriet Lane Home of the Johns Hopkins Hospital, Baltimore. First printing, December, 1947; second printing April, 1948. The Commonwealth Fund, New York City.

The attention of the internist has of recent years been directed to a reappraisal of the whole subject of congenital malformations of the heart. This reappraisal is in large measure due to the successful surgical treatment of certain types of malformation. Among those who played an important part in the development of the newer therapy, Dr. Taussig occupies a pre-eminent position. In keeping with her interest in the restoration of normal function, her volume treats the subject matter throughout from a functional point of view, the presence or absence of cyanosis serving as the clinical basis of classification of the various malformations. She rejects Dr. Maud Abbott's classification as of no help for clinical purposes, although admitting its anatomic soundness.

In a volume of such general excellence it is difficult to select any part for special praise. But, the chapter on "Methods of Diagnosis" is to be commended for its clear analysis of the information obtainable by the usual procedures of physical examination, x-ray or fluoroscopic studies and the electrocardiogram. The same clarity and thoroughness is found in the discussion of the diagnosis of the individual malformations. In fact, this work is notable for its clearness of exposition. This is materially aided by fine illustrations of great teaching value.

It can be recommended unreservedly to anyone interested in congenital heart disease. In the words of Dr. Edwards A. Park, who wrote the foreword: "She has done for the clinician what Dr. Maud Abbott did for the pathologist; namely, made the malformations of the heart understandable and accessible, but her work has a practical usefulness which Dr. Abbott's, owing to its nature, could not possess".

GEORGE BACHMANN, M. D.

* * *

*Abdominal Operations*, by Rodney Maingot, F.R.C.S. (Eng), Surgeon to the Royal Free Hospital and the Southend General Hospital, London. This new work is of prime value to the abdominal surgeon, the general surgeon, the surgical resident and the intern as a presentation of the detailed technics (beautifully and

profusely illustrated) of modern abdominal surgery combined with the necessary diagnostic data, choice of operation in the individual case, preoperative care of the patient, difficulties and dangers which may confront the surgeon during operations, the immediate and remote results of operations described, postoperative care and other factors of importance in reducing operative mortality.

Every effort has been made by the author and his distinguished collaborators to supply from their extensive experience an authoritative and practical work which is up to date in every respect.

Published by Appleton-Century-Crofts, Inc., October 1948. 35 West 32nd Street, New York 1, New York. Price $16.00.

* * *

*The Shame of the States*, by Albert Deutsch. One out of every twenty Americans is, has been, or will be, a patient in one of the state mental hospitals of America. This shocking but statistically true statement should make most of us realize the vital necessity for a complete re-evaluation of our state mental hospitals. The Shame of the States points the way. Here is a camera-document story of conditions in our public mental hospitals, where more than half a million Americans are kept—for the most part—in varying degrees of degradation and despair. For eighteen months, Albert Deutsch conducted the most comprehensive journalistic survey of these institutions ever made, inspecting more than thirty hospitals from coast to coast. He took along news photographers on many of these visits, and their candid pictures reproduced in this book underscore the author's biting indictment of a society which allows this shocking mistreatment of human beings. Here are the dispassionate facts and figures, here is the story of: Hundreds of naked men and women herded into huge, filth-infested wards; men untended and untreated, many of them semi-starved . . . Hundreds of sick people shackled, strait-jacketed, and bound to their beds—patients amenable and entitled to treatment who were allowed to die uncared for. Indisputable evidence of deaths directly caused by manhandling and criminal neglect. But this book is not so much concerned with institutions as with the people who live in them—the mentally sick of our country. It is their story told against background material on modern psychiatry based on the author's years of experience as a lay writer of acknowledged authority in this special field. There are no personal scapegoats in The Shame of the States. Deutsch points the finger directly at legislative penny-pinching, political chicanery, and public apathy and ignorance. The picture is not all black, for quite often Deutsch found inspired doctors, humane superintendents, and well-trained staffs working hard to utilize their limited resources toward curing instead of keeping patients. But the picture as a whole is a vitally disturbing one and one that ought to be met squarely by every American. The Shame of the States marshals the facts and tells the story—it does even more: it shows the way out of a dilemma by a practical and dynamic program of reform for mental hospitals in every state of the union.

Published by Harcourt, Brace and Company. 383 Madison Avenue, New York 17, New York. Price $3.00.

* * *

*The Case Against Socialized Medicine*, by Lawrence Sullivan. This book presents in two-minute chapters the historic background of socialized medicine, as now advocated in the United States. It is a book of far-reaching significance, for if American medicine can be taken over by the government, then every other activity also may be socialized under a gigantic federal bureaucracy.

The story is told principally from the sworn testimony of witnesses before the House and Senate. Straightforward, clear, succinct, it weighs without partisanship the story of socialized medicine in other lands. It tells what happens when people lose the right to select their own doctor. It tells how medical education curdles under the lash of executive-order control. It tells what happens to the health of a nation when village doctors are selected like postmasters.

If you feel that you have any stake whatsoever in the fight for freedom and ordered liberty under law, you should read these vital pages.

Lawrence Sullivan, an active journalist for thirty years, brings to his subject an intimate, firsthand knowledge of governmental administration. His earlier books on the problems and frustrations of our Federal bureaucracy have won the attention of scholars the world around. In this book he focuses the experience of more than a quarter-century in Washington upon the day-to-day practicalities of socialized medicine.

As a student at Northwestern University, the author specialized in economics and history. Since 1919 he has devoted himself exclusively to newspaper, magazine, and radio reporting. He writes from the throbbing corridors of Capitol Hill.

Published by Statesman Press, National Press Bldg., Washington 4, D. C. Price $1.50.

* * *

*A History of the Heart and the Circulation*, by Fredrick A. Willius, M.D., M.S. in Medicine, and Thomas J. Dry, M.D., Ch.B., M.S. in Medicine. A fascinating story by two heart men. In his foreword, Dr. Donald Balfour calls this new book "delightful reading." It is that definitely, but it is also much more. It is a significant addition to the small but growing literature on the historical background of medicine, and as such demonstrates the growing interest in that subject and in the medical classics.

You, too, will find this new book "delightful reading" and a stimulating experience besides. You cannot help feeling a deep pride as you trace the efforts of your predecessors from antiquity right down to the twentieth century as they grope painstakingly, often brilliantly, through the centuries toward the correct anatomical and physiological picture of the heart and the circulation.

The authors (both well known for their clinical work in cardiology) have assembled and correlated a truly remarkable amount of historical and biographical data. This information dating from 3000 B.C.—is broken down into eight chronological periods. In each of these the distinctive features of the existing civilization are noted, with emphasis on the advantages or disadvantages offered to medical research during that period.

An outstanding feature of this work is the section that traces significant milestones in the history of numerous cardiovascular problems. For instance aneurysm, heart block, cardiovascular diagnostic signs, the pulse, the pericardium and its diseases are followed through from their earliest recognition right on up to the latest developments. Thus do the authors pave the way for further findings in the field and for surer and earlier diagnoses and more responsive therapy.

Included also are detailed biographies of twenty of those whose work, discoveries and influence have profoundly affected the entire course of cardiovascular knowledge. The 171 illustrations in this volume includes a distinguished gallery of 162 portraits of medical pioneers. This great story interesting as only history can be is "must" reading for every doctor who would appreciate and practice the art as well as the science of medicine. Published by W. B. Saunders Company, 1948, Philadelphia and London.

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## HEALTHGRAM

Instead of crying: "Can we afford some new service?" we are now tending to realize that we cannot afford ill-health and the resulting loss of productive work. We are beginning to realize that expenditure on preventive services and on health research pays an enormous dividend.—Sir Andrew Davidson, Brit. M. J., Feb. 7, 1948.

# PRESIDENT'S PAGE

## WHAT CHRISTMAS MEANS

*"It was always said of him that he knew how to keep Christmas well."*
—CHARLES DICKENS.

A long, long time ago in the town of Bethlehem in Judea a child was born in a manger. His birth changed the destiny of the world for, as He grew, He influenced all people who came about Him. His teachings disturbed many tenets of the Hebrew law and His precepts showed those about Him the falseness and futility of pagan philosophy. Many of the ideologies developed during the centuries of ancient civilizations were affected by His simple teachings of Faith, Hope and Love. He taught that hate and warfare were evil and said that men should not be overcome of evil. but overcome evil with good. He assured the people of his Father's love for them and preached about the immortality of the soul. He fed the hungry and clothed the naked; He healed the sick and infirm, and finally He gave His life that all who believed in Him would have eternal life.

This Man, whose birthday we celebrate on the 25th of December, lived almost 2000 years ago. With each succeeding generation His teachings have increased in power, so that down through the ages the influence of this kind and gentle Man of Galilee has been felt by all nations of the world. It has been carried to the far-flung outposts of civilization and has penetrated the jungle. A great deal has been accomplished since the Sermon on the Mount, and we should be thankful. The happiness that Jesus Christ brought to this world by His teachings has been, and will continue to be, cause for thanksgiving and cheerfulness, and a more abiding faith in God.

In our generation, all too many Christmas seasons have been saddened by the evil deeds of men. Such ungodly acts will continue until the love and spirit of Him whose birth we celebrate encompass the world.

What does Christmas mean? The joyfulness of little childen at Christmas-time as they sing of the Christ child and of the shepherds who were guided by the star; and as they learn of the gifts of gold and frankincense and myrrh which the wise men brought to the Holy Child: A repetition of the joyous angel chorus proclaiming Peace on earth, Good will toward men, bring back memories of the golden days of youth.

Do you recall those happy days of childhood and the night before Christmas? Think again of Santa Claus and stockings filled with toys and candy; and in memory see the gifts to loved ones and friends! After the celebration it seems that another will never come! The years go by —faster and faster; the members of the family separate,—the vacant chairs increase—but there is always the urge to return home and to be together for Christmas. As we enjoy the feast on that day we know that people of almost all lands and every tongue are celebrating with us the birth of Him in whom all men are blessed.

At Christmas time I often think how fortunate are the English speaking peoples of the world. Children and their elders can revel in the charm and magic of Dickens' "Christmas Carol". Thackeray suggested that no better sermon on charity was ever preached! The far-reaching influence of this immortal story occasioned great hospitality. Hundreds of kind firesides and festive boards, accompanied by an out-pouring of good feeling at Christmas, is experienced wherever the Christmas Carol is appreciated.

What then does Christmas mean? It means *faith* and *love* and *life*. It is a season for good fellowship and great rejoicing. It is a time to give thanks to Him for the many blessings He has given us. The spirit of Christmas has so permeated the civilized world that very nearly all peoples, even non-Christians, enter into the cheerfulness and charity of the joyous season. Happy indeed is the man who, like a little child, can enjoy and appreciate it.

—EDGAR H. GREENE, M.D.

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

478 Peachtree Street, N. E., Atlanta, Ga.

DECEMBER, 1948

## ROSTER OF THE ASSOCIATION

This number of THE JOURNAL contains the roster of the Association. Look for your name now. If you do not find it, something has gone wrong. If you find it, be sure it has been spelled right, and that your address has been recorded right. If anything has gone wrong, you should notify the Secretary of the Association immediately.

Nineteen hundred forty-eight has been a banner year in the history of the Association. Not only does the membership roster contain more names than any previous roster, but there has been increased interest on the part of all members in those things which have made American medicine the best in the world of today. Graduate education has become commonplace, and always there are new plans to increase and improve the facilities for medical care and public health.

In addition to our own roster of members, let us not forget the roster of the Woman's Auxiliary to this Association. This will be found on other pages of this JOURNAL. Look for your wife's name, and remember that she has done much to help you and the other members of the Medical Association of Georgia.

## BARBITURATES LEADING CAUSE OF FATAL ACCIDENTAL POISONING

Too many people who keep substances containing poison around the house are ignorant of their potential dangers, according to the *Statistical Bulletin* of the Metropolitan Life Insurance Company for August 1948. "As a consequence of the accidental misuse or ingestion of drugs and poisonous substances, about 1,500 persons, more than a quarter of them children under 5, die in the United States each year. This figure excludes deaths due to gas or food poisoning.

"Substantial long-term gains have been made against deaths from accidental poisoning. Over the period 1933-1946, the death rate has averaged about one per 100,000 population annually, or about one third less than in the preceding decade.

"Fewer accidental deaths have been recorded in recent years from virtually every type of poison-containing compound with the notable exception of the barbiturates, which now are far and away the leading cause of fatal accidental poisonings. In 1946 barbituric acid and its derivatives accounted for more than a quarter of all fatal accidental poisonings in the United States; in the early 1930's their share was only about 1/18 of the total. The pattern of accidental poisonings in the United States have undergone other marked changes over the years. Nux vomica and strychnine, which as recently as the late 1930's were charged with the loss of about 100 lives annually, took only 45 lives in 1946. Bichloride of mercury is another of the classical poisons that is causing fewer deaths now than formerly. Wood and denatured alcohol, which two decades ago exacted a death toll far geater than any other class of poisons, is now second in importance, taking 139 lives in 1946 as compared with 436 for the barbiturates.

"A study of the records for 1946 and 1947 of the 225 persons insured in the Industrial Department of the Metopolitan Life Insurance Company who died as the result of accidentally ingesting various poison-containing compounds, throws some light on the circumstances surrounding such tragedies. More male than female policyholders were fatally poisoned, the death rate of the males being more than 50 per cent higher. This reflects mainly the great preponderance of males in the toll of deaths due to wood or denatured alcohol poisoning. Males accounted for 40 of the 48 such deaths recorded in 1946-1947. A large percentage of the victims of wood and denatured alcohol either mistook it for grain alcohol, or labored under the false impression that it could be consumed without harm. The study also shows that a wide variety of other substances, including hydrochloric acid, carbon tetrachloride, cresol, and camphor oil, were mistakenly consumed as beverages.

"In striking contrast to wood and denatured alcohol, barbituric acid derivatives caused the deaths of a larger number of women than of men policyholders—38 and 28 respectively. The female deaths from this cause accounted for 40 per cent of all female deaths from poisoning. Other studies show a much higher ratio of female to male deaths from barbiturates. While these deaths occur mainly among adults, there were five deaths among children 2 years old or younger in the present investigation.

"Oil of wintergreen (methyl salicylate), a liniment used in many American homes, was responsible for 14 deaths and was the third ranking cause in this study. Half of the victims were 2 years old or younger. Among adults a few deaths were caused by their mistaking it for a cough medicine or other innocuous liquid. Several other deaths recorded in this study occurred when policyholders, reaching for a bottle of medicine, got hold of a poison-containing compound instead. Failure to turn on the light to see what is being taken and similarity of the medicine bottle to the container with the fatal potion are often contributing factors in accidents of this kind.

"Lye killed ten persons, three of them one year olds. Three of the seven persons dying from arsenic and four of the five strychnine

victims were young children. In the case of arsenic, rodent poisons were mainly responsible. Two of the strychnine deaths among children resulted from ingestion of pills containing this poisonous substance. It is encouraging to note that since 1924 there has been a very considerable decrease in the number of accidental deaths from strychnine pills among children.

"After all the warnings that have been given and the tragic incidents reported in the press, it is hard to undestand why anyone would store disinfectants, insecticides, and similar materials near food, food containers, or medicines. But this dangerous practice and others like it persist. The marked rise in deaths from the barbiturates is especially disturbing. Greater control by the health authorities over the sale of these sedatives may bring about a reduction in mortality from them."

## WRITER DISCUSSES SPEECH DEFECTS

Stammerers and stutterers have the same speech defect, but "clutterers" are only persons who try to talk rapidly and do not enunciate clearly, says Francis Griffith.

Writing in the October issue of *Hygeia*, health magazine of the American Medical Association, Mr. Griffith, speech therapist and principal of the Utrecht High School, Brooklyn, N. Y., explains how stutterers get that way.

Stuttering, the repetition of sounds or the inability to utter them, may be a symptom of a deep-rooted emotional inadequacy, he points out. "Clutterers," persons who jumble words, do not suffer from a psychoneurosis, according to Mr. Griffith.

Stuttering is not an indication of low intelligence, the article indicates. Mr. Griffith quotes Havelock Ellis as saying that "there is an abnormal prevalence of stammering among British persons of ability." Ellis lists among them Charles Darwin, "Lewis Carroll," and Charles Lamb.

Strangely enough, stutterers don't stutter when they sing or talk to themselves or enact roles in a play, and they usually have no difficulty in talking to a baby or an animal. About 1 per cent of the population stutters, and more than half of these are men.

Among theories about the cause of stuttering are the ideas that it is a result of unrhythmic breathing, blood deficiencies, heredity, temporary amnesia, fear, timidity, or psychic shock. Perhaps there is some truth in all these theories, Mr. Griffith says.

Stuttering is not contagious. A person who is predisposed toward the speech defect because of inherited neuropathic tendencies may acquire it from association with a stutterer, however, the article points out.

For parents of children who stutter, Mr. Griffith offers this advice:

1. Don't believe that your child will "grow out of" his speech defect. Take the child to a reputable speech clinician and let him decide when speech retraining should begin. Many colleges and universities maintain speech clinics where diagnosis and treatments are provided free. Or you can write to your state department of education for the name and location of the speech clinic nearest your home.
2. Let him use either his right or left hand, whichever is the more natural.
3. Don't try to supply words for him and do not discuss stuttering in his presence.
4. As far as possible, use only one language at home.
5. See that he gets plenty of wholesome food and sufficient exercise and rest. Remediable physical handicaps should receive proper medical attention.
6. Maintain an atmosphere of ease and relaxation at home. Encourage him when you can, do not mimic his speech, and treat him as a normal person at all times.
7. Encourage him to participate in group activities with children of his own age and both sexes.
8. Beware of schools that offer guarantees to cure stuttering in a few months. Any school that offers such a "guarantee" is a quack institution capitalizing on human suffering. The best speech clinics in the United States are free.

## STUDY SMEAR TEST TECHNIC TO DETECT EARLY CANCER

Cancer of the lung and uterus may be detected earlier by the "smear" test than by any other means, say three researchers from the laboratory of the Vincent Memorial Hospital, Boston.

Writing in the October 16 issue of *The Journal of the American Medical Association*, the researchers—Maurice Fremont-Smith, M.D., Ruth M. Graham, B.S., and Joe V. Meigs, M.D., say:

"We believe that in certain regions of the body an earlier diagnosis of cancer can be made through proper use of this method than can be achieved by any other means. Particularly is this true of cancer of the uterus and the lung. There is reason to hope that detection of early cancer of the stomach and the urinary tract may also become practicable by the use of the cell technic."

The researchers studied shed body cells from 1942 through 1947. Diagnosis by the smear test depends on the fact that malginant tumors shed cells. If the presence of these cells in any body fluid is established, the cells must have originated from a tumor near the fluid examined.

The test which the researchers used consists of processing samples of body fluid by a method adapted from the technic developed by George N. Papanicolaou, M.D., of the Cornell University Medical College, New York City, and examining the finished specimens under the microscope.

"Criteria have been established for the identification of malignant cells and their differentiation from the many types of normal cells shed into the body fluids," they explain, adding:

"The ability to make accurate diagnoses by this method is difficult to acquire, obtainable only by months of intensive training and perfected only through

constant use. Exploitation of the diagnostic method has already occurred. The misuse and exploitation of this method by untrained persons cannot be tolerated."

During the study the researchers examined vaginal smears from 5,621 women, 354 of whom had cancer of the cervix. Diagnosis of cancer was made by the smear test in 317 of these 354 cases. There were 69 cases in which a diagnosis of cancer made by the smear test was not confirmed by other examination—a false positive error of 1.3 per cent.

If patients with proved cancer only are considered, the smear test fails to detect the disease in about 10 per cent of women with cancer of the cervix, the researchers say. Biopsy also misses about 10 per cent of cancers of the cervix, according to the article. Biopsy is the removal, preparation, and examination under the microscope of samples of tissue.

In a series of 30 cases, the smear test proved "significantly more accurate" than did the first biopsy taken in detecting preinvasive cancer of the cervix, the researchers report.

Results of examination by vaginal smear of 358 women who came for general physical examination tend "to confirm previous evidence that about one woman in every hundred bears in her cervix an early malignant lesion often invisible and symptomless," they point out.

During the last year of the study, not one false diagnosis of cancer based on examination of sputum by the smear test was made, according to the article.

The researchers say that they were able to diagnose correctly by the smear test 71 per cent of bladder cancers, 50 per cent of cancers of the kidney, and 42 per cent of cancers of the prostate gland.

A hundred and ninety three patients were studied by making smears of gastric fluid. Smears that indicated the presence of cancer were obtained from 35 of the 65 patients in this group who had gastric cancer. Of the 128 patients in the group who did not have gastric cancer, smears were reported to indicate cancer in three.

"The likelihood of cancer in a patient with a positive smear is so high that this observation cannot be disregarded. A positive smear demands that every possible effort be made to establish the diagnosis. Radical therapy is justified, however, only if confirmatory evidence is obtained. A negative smear should never outweight other evidence in favor of malignant disease," the researchers say.

## PARENTS CAN IMPROVE HIGH SCHOOL ATHLETICS

Although most parents show enthusiasm for high school football, they seldom contribute much toward making this and other sports a powerful educational influence, says Fred V. Hein, Ph.D., Chicago, consultant on physical fitness for the Bureau of Health Education of the American Medical Association.

Writing in the current issue of *Hygeia*, health magazine of the American Medical Association, Dr. Hein points out that parents are potentially the strongest force in determining school athletic policies.

"The coach's attitudes and practices are often a reflection of the community. The majority of high school coaches are sincere men, genuinely interested in the welfare of youth. Unfortunately coaches are sometimes hired primarily to win games, and they are told in no uncertain terms that their jobs depend on a winning record. Is it any wonder that the interests of the boy become secondary under these conditions?" he says.

It is a splendid thing to win, but victories must not be gained at the expense of the health of the players, Dr. Hein emphasizes.

"Most schools require a special medical examination of those who participate in vigorous sports. If such a policy is not followed in your community, it should immediately be put into force.

"When a player is injured, only a physician should decide as to his fitness to continue play. If a boy has been ill or had an injury that has kept him out of play for some time, a permit from a doctor should be secured before he returns to practice or competition."

Parents should make certain that schools supply the best equipment for contact sports, according to Dr. Hein.

"Purchases of athletic equipment are sometimes made with economy in mind at so-called bargain prices. There are no bargains worth jeopardizing the safety of any boy."

If players have not been properly conditioned, they are likely to be injured in early games, he indicates. In many states the athletic code requires at least three weeks of conditioning before the first game is played, with a suitable number of practice periods preceding the first contact scrimmage.

Teams from small schools should play teams representing institutions of similar size, he advises.

"The larger schools have more boys to draw from, and while it is possible that the first teams may be equal in ability, the boy representing the small school may find himself pitted against four or five fresh players in a game, each as capable as his predecessor. Under these conditions injuries are naturally more likely to take place," points out Dr. Hein.

When a high school team wins a conference championship, extra games scheduled to determine state or regional championships can be hazardous, he says.

"The number of games should be determined before the season starts according to sensible recommendations—about seven to nine games in football—and then held to regardless of pressure to go beyond a safe schedule for high school boys. The majority of high school athletes, in spite of mature size and appearance, are still immature."

## AUREOMYCIN VALUABLE FOR EYE INFECTIONS

Aureomycin, one of the newer antibiotic drugs, produces excellent results against several kinds of conjunctivitis, the most common type of eye infection, say two New York physicians.

Writing in the October 9 issue of *The Journal of the American Medical Association*, Alson E. Braley, M. D., and Murray Sanders, M.D., of the Departments of Ophthalmology and Bacteriology, Columbia University College of Physicians and Surgeons, New York, describe the use of aureomycin for eye diseases on 100 patients.

The physicians applied aureomycin in solution to the eyes of all these patients. In a few cases they also gave injections of the drug.

Ninety-six of the patients had conjunctivitis, and results of treatment with aureomycin in most of these cases were excellent.

Aureomycin is also effective against some eye ulcers, the physicians found. The drug irritated the eyes of patients "only occasionally" and apparently produced no allergies or toxic effects, they say.

## VETERANS' NEWS

One section of the library in the Vancouver, Washington, Veterans Administration hospital has been set aside as a "sports corner." Here, patients can browse among sports magazines and books, or study football schedules and records posted on the walls.

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Well-known New York State sports figures recently paid a six-hour visit to patients in the Veterans Administration Center in Bath, New York. They broadcast over the Center's bedside radio network, gave a boxing exhibition, took part in a quiz show in the auditorium and visited bedfast patients in the wards.

# Officers and Committees of the Medical Association of Georgia 1948-1949

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F. P. Calhoun, Jr. ..... Atlanta
Lewis Patton ..... Athens

*Syphilis*

Harold P. McDonald, Chairman ..... Atlanta
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Wallace Bazemore ..... Macon
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J. Z. McDaniel ..... Albany
Harry Righton ..... Savannah
R. F. Wheat ..... Bainbridge
L. W. Pierce ..... Waycross
Hartwell Joiner ..... Gainesville
Reese Coleman ..... Atlanta
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Lee Howard ..... Savannah
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Thomas J. Ferrell ..... Waycross
Max Mass ..... Macon
Jack C. Norris ..... Atlanta
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Hollis Hand ..... LaGrange
Richard Torpin ..... Augusta
Cleveland Thompson ..... Millen
Patrick M. Howard ..... College Park
Robert Martin, III ..... Cuthbert
W. F. Reavis ..... Waycross
Vernon E. Powell ..... Atlanta
John Sharpley ..... Savannah
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*Georgia State Medical Association*
*(Negro)*

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Lee H. Battle, Jr. ..... Rome
J. F. Hanson ..... Macon
H. H. Allen ..... Decatur

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Frank Schley ..... Columbus
Hall Farmer ..... Macon
M. M. McCord ..... Rome
Howard J. Morrison ..... Savannah
R. W. Fowler ..... Marietta
A. M. Johnson ..... Valdosta

*Appendicitis*

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J. K. Quattlebaum ..... Savannah
C. K. Wall ..... Thomasville
F. F. Rudder ..... Atlanta
Ben H. Clifton ..... Atlanta
B. L. Harbin ..... Rome
W. P. Nicolson, Jr. ..... Atlanta
Kenneth McCullough ..... Waycross
R. L. Rogers ..... Gainesville
Julius Pierotti ..... Atlanta
Stewart D. Brown ..... Royston
W. M. Feild ..... Albany
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M. M. McCord ..... Rome
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Henry M. Moore ..... Thomasville
J. Dean Paschal ..... Dawson
W. J. Cranston ..... Augusta
Francis Martin ..... Shellman
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Jack C. Norris, Chairman ..... Atlanta
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Edgar R. Pund ..... Augusta
Lee Howard ..... Savannah
Cleveland Thompson ..... Millen
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R. C. Pendergrass ..... Americus
J. G. McDaniel ..... Atlanta
W. F. Jenkins ..... Columbus
James J. Martin ..... Atlanta

B. T. Beasley ..... Atlanta
Enoch Callaway ..... LaGrange
R. H. McDonald ..... Newnan
James J. Clark ..... Atlanta
J. E. Scarborough ..... Emory University
O. C. Woods ..... Milledgeville
D. Lloyd Wood ..... Dalton
J. T. McCall ..... Rome
D. M. Bradley ..... Waycross
M. E. Winchester ..... Brunswick
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W. H. Roberts ..... Augusta
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W. J. Murphy ..... Atlanta
Thomas Harrold ..... Macon
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*Tuberculosis*

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Eustace Allen ..... Atlanta
Warren Gilbert ..... Rome
R. C. Major ..... Augusta
H. C. Schenck ..... Atlanta
W. C. Cook ..... Columbus
E. F. Wahl ..... Thomasville
H. C. Atkinson ..... Macon
Horace E. Crow ..... Rome
A. Worth Hobby ..... Atlanta
J. L. Elliott ..... Savannah
Rufus F. Payne ..... Rome
Mark S. Dougherty ..... Atlanta
Bon M. Durham ..... Amreicus
Walter Martin ..... Shellman
Malcolm P. Mullen ..... Atlanta

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Chas. H. Richardson, Chairman ..... Macon
James N. Brawner ..... Atlanta
Sam Anderson ..... Milledgeville
Shelley C. Davis ..... Atlanta
R. C. McGahee ..... Augusta
W. Bruce Schaefer ..... Toccoa
Olin S. Cofer ..... Atlanta
Enoch Callaway ..... LaGrange

*Revision of Pharmacopeia of U. S.*

C. C. Aven, Chairman (1949) ..... Atlanta
Allen H. Bunce (1949) ..... Atlanta
Hal M. Davison (1949) ..... Atlanta

*Maternal Mortality and Infant Deaths*

H. F. Sharpley, Jr., Chairman ..... Savannah
C. B. Upshaw ..... Atlanta
Richard Torpin ..... Augusta
Wm. C. Cook ..... Columbus
G. G. Lunsford ..... Atlanta
John B. Cross ..... Atlanta
David M. Wolffe ..... Albany
O. R. Thompson ..... Macon
W. C. Goodpasture ..... Atlanta
Sam Y. Brown ..... Atlanta
J. B. Kay ..... Byron
Tom Dover ..... Athens
Amey Chappell ..... Atlanta

*Medical Education*

W. E. Persons, Chairman ..... Atlanta
J. C. Patterson ..... Cuthbert
H. D. Allen, Jr. ..... Milledgeville
C. K. Wall ..... Thomasville
C. B. Lord ..... Jefferson

*Neuropsychiatry*

W. A. Smith, Chairman ..... Atlanta
Albert F. Brawner ..... Smyrna
Richard B. Wilson ..... Atlanta
Hervey M. Cleckley ..... Augusta
Newdigate M. Owensby ..... Atlanta

## PREPAYMENT MEDICAL CARE PLANS

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J. L. Elliott, Co-Chairman ..... Savannah
W. S. Dorough ..... Atlanta
Sam Anderson ..... Milledgeville
W. G. Elliott ..... Cuthbert

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Lee Howard, Chairman ..... Savannah
Charles T. Brown ..... Guyton
A. B. Daniel ..... Statesboro
J. L. Elliott ..... Savannah
R. G. Brown ..... Swainsboro
Katrine Rawls ..... Sylvania
J. W. Palmer ..... Ailey
L. R. Jelks ..... Reidsville
W. W. Aiken ..... Lyons
O. D. Middleton ..... Ludowici

*Second District*

C. K. Wall, Chairman ..... Thomasville
C. H. Watt ..... Thomasville
Harry A. Wasden ..... Quitman
A. G. Funderburk ..... Moultrie
M. A. Ehrlich ..... Bainbridge
I. M. Lucas ..... Albany
J. V. Rogers ..... Cairo
D. P. Belcher ..... Pelham
C. S. Pittman ..... Tifton
J. G. Standifer ..... Blakely
G. S. Sumner ..... Sylvester

*Third District*

W. G. Elliott, Chairman ..... Cuthbert
Guy J. Dillard ..... Columbus
D. B. Ware ..... Fitzgerald
Charles Adams ..... Cordele
M. L. Malloy ..... Vienna
C. P. Savage ..... Montezuma
John Bush ..... Columbus
Albert R. Bush ..... Hawkinsville
J. C. Patterson ..... Cuthbert
T. Schley Gatewood ..... Americus
R. C. Montgomery ..... Butler
J. H. Baxter ..... Ashburn
John L. Gallemore ..... Perry

*Fourth District*

Kenneth S. Hunt, Chairman ..... Griffin
J. W. Chambers ..... LaGrange
R. L. Hammond ..... Jackson
S. F. Scales ..... Carrollton
T. J. Busey ..... Fayetteville
M. F. Cochran ..... Newnan
A. W. Carter, Jr. ..... McDonough
S. B. Traylor ..... Barnesville
R. B. Gilbert ..... Greenville
S. L. Waites ..... Covington
M. M. Head ..... Zebulon
G. L. Walker ..... Griffin
R. L. Carter ..... Thomaston

*Fifth District*

Marion C. Pruitt, Chairman ..... Atlanta
Spencer A. Kirkland ..... Atlanta
Major Fowler ..... Atlanta
L. P. Matthews ..... Atlanta
H. E. Griggs ..... Conyers

*Sixth District*

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H. G. Weaver ..... Macon
Charles B. Fulghum ..... Milledgeville
C. H. Richardson ..... Macon
J. A. Camp ..... Roberta
C. S. Jernigan ..... Sparta
F. S. Belcher ..... Monticello
John R. Lewis ..... Louisville
Joseph D. Zachary ..... Gray
John A. Bell ..... Dublin
George H. Alexander ..... Forsyth
O. D. Lennard ..... Sandersville
S. N. Rubin ..... Gordon

*Seventh District*

W. H. Perkinson, Chairman ..... Marietta
D. Lloyd Wood ..... Dalton
A. L. Horton ..... Cartersville
W. B. Hair ..... Summerville
L. L. Welch ..... Marietta
C. V. Vansant ..... Douglasville
Lee H. Battle, Jr. ..... Rome
J. E. Billings ..... Calhoun
C. H. Allen ..... Bremen
Cecil B. Elliott ..... Cedartown
Frank L. O'Connor ..... Rossville
H. J. Ault ..... Dalton

*Eighth District*

W. F. Reavis, Chairman ..... Waycross
Alton M. Johnson ..... Valdosta
J. T. Holt ..... Baxley
T. H. Clark ..... Douglas
F. L. Mann ..... McRae
W. L. Pomeroy ..... Waycross
J. Alvin Leaphart ..... Jesup

*Ninth District*

C. B. Lord, Chairman ..... Jefferson
D. H. Garrison ..... Clarkesville
W. T. Randolph ..... Winder
J. S. Jolley ..... Homer
C. D Whelchel ..... Gainesville
Bruce Schaefer ..... Toccoa
A. A. Rogers ..... Commerce
Marcus Mashburn, Sr. ..... Cumming
Robert T. Jones, III ..... Canton
J. C. Dover ..... Clayton
W. E. Burdine ..... Blue Ridge
L. G. Neal ..... Cleveland

*Tenth District*

Harry L. Cheves, Chairman ..... Union Point
J. Victor Roule ..... Augusta
John Simpson ..... Athens
A. S. Johnson ..... Elberton
Stewart D. Brown ..... Royston
W. H. Lewis ..... Siloam
A. O. Meredith ..... Hartwell
B. F. Riley, Jr. ..... Thomson
J. H. Nicholson ..... Madison
L. M. Huie ..... Monroe
A. W. Davis ..... Warrenton
T. C. Nash ..... Philomath
W. J. Cranston ..... Augusta

*Fraternal Delegates to Other States*

*Alabama*—J. A. Wood, Macon; Walter D. Martin, Shellman; Reese Coleman, Atlanta.

*Florida*—J. E. Penland, Waycross; C. E. Rushin, Atlanta; J. W. Simmons, Brunswick.

*North Carolina*—W. A. Johnson, Elberton; F. Lee Bivings, Atlanta; C. G. Butler, Gainesville.

*South Carolina*—G. Lombard Kelly, Augusta; D. N. Thompson, Elberton; Jesse L. Meeks, Gainesville.

*Tennessee*—Murl Hagood, Marietta; E. L. Ward, Gainesville; Trammell Starr, Dalton.

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First District: James M. Byne, Jr., Waynesboro, Sept. 1, 1951.
Second District: C. K. Sharp, Arlington, Sept. 1, 1951.
Third District: J. C. Patterson, Cuthbert, Sept. 1, 1948.
Fourth District: J. A. Corry, Barnesville, Sept. 1, 1949.
Fifth District: Robert F. Maddox, Atlanta, Sept. 1, 1948.
Sixth District: C. L. Ridley, Macon, Sept. 1, 1950.
Seventh District: W. P. Harbin, Jr., Rome, Sept. 1, 1950.
Eighth District: B. H. Minchew, Waycross, Sept. 1, 1950.
Ninth District: Robert L. Rogers, Gainesville, Sept. 1, 1951.
Tenth District: D. N. Thompson, Elberton, Sept. 1, 1949.

STATE OF GEORGIA AT LARGE**

*Georgia Dental Association*

W. K. White, Savannah, Sept. 1, 1951.
J. G. Williams, Atlanta, Sept. 1, 1951.

*Georgia Pharmaceutical Association*

George Wright, Tifton, Sept. 1, 1953.
J. B. Butts, Milledgeville, Sept. 1, 1953.

*Nominated by their respective district medical societies and appointed for six year terms.
**Nominated by their respective associations.

STATE BOARD OF MEDICAL EXAMINERS

T. H. Clark ..... Douglas
Murdock Equen ..... Atlanta
Rufus A. Askew ..... Atlanta
Grady N. Coker ..... Canton
Steve P. Kenyon ..... Dawson
Harrold P. McDonald ..... Atlanta
L. G. Neal ..... Cleveland
J. W. Palmer ..... Ailey
W. H. Wall ..... Blakely
R. F. Wheat ..... Bainbridge

## THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY POST-CLINICAL TOUR TO MEXICO

The New Orleans Graduate Medical Assembly is sponsoring an interesting post-clinical tour to Mexico, planned to follow the 1949 Assembly meeting. On Saturday, March 12, a party composed of doctors and their wives, will leave by Pan American Clipper for Mexico City and headquarters will be at the new and beautiful Hotel Del Prado.

A medical program has been arranged for the group in Mexico City and the itinerary includes visits to Cuernavaca, Taxco, Puebla, Fortin, Oaxaca, Orizaba and other points too numerous to mention.

Departure from New Orleans will be on Saturday, March 12 and the group will return on Sunday, March 27.

Details and a complete itinerary are available at the office of the Assembly, Room 105, 1430 Tulane Avenue, New Orleans 12, Louisiana.

## WAYCROSS EYE CLINIC, INC.

There has been established in Waycross a surgical treatment center known as Waycross Eye Clinic. A corporate charter was granted on July 28, 1948. Its purpose can best be stated in the second paragraph of the petition.

"They desire to be chartered as a charitable institution and not for individual pecuniary gain, for the purpose of establishing, maintaining and supporting a surgical clinic for the treatment of persons suffering from diseases or deficiencies of the eye, and particularly for persons who have lost their sight, or who do not have sight, arising from any cause whatsoever, which may be alleviated in whole or in part by surgical treatment, and whose situation is such that their condition would remain untreated unless it could be treated without charge."

Since the clinic was organized, 53 cataract cases have been operated on, 12 squints, three enucleations and six cases of glaucoma have been treated. No medical cases are accepted. The condition must first be diagnosed by a physician of the community from which the patient comes and some responsible person must vouch for the indigency of the family. The clinic does not limit its service to any race or creed. The expense of the clinic is borne by a very generous friend of the physicians of Waycross, and the professional services are rendered by the physicians who give their time to the specialty of ophthalmology.

The directors of the clinic are: Mr. L. B. Harrell, Dr. B. H. Minchew, Dr. B. E. Collins, Dr. Leo Smith, Dr. W. D. Mixon, Judge J. Dorsey Blalock and Mr. E. Kontz Bennett.

The roster of the Association, printed on the following pages, contains about 2193 names. Is yours listed?

# MEDICAL ASSOCIATION OF GEORGIA

## *County Medical Societies 1948*

### APPLING COUNTY

**Officers**

President ..... McCracken, H. C.
Secretary-Treasurer.. Brown, J. B., Jr.
Delegate..... McCracken, H. C.

**Members**

Brown, J. B., Jr., Baxley
Holt, J. T., Baxley
Kennedy, F. D., Baxley
McCracken, H. C., Baxley

### BALDWIN COUNTY

**Officers**

President ..... Walker, E. Y.
Vice-President ..... Combs, Joe D.
Secretary-Treasurer..... Smith, M. E.
Delegate..... Anderson, S. A.
Alternate Delegate.. Bradford, R. W.
Censors: Yarbrough, Y. H.; Bradford, R. W., and Pennington, Veronica M.

**Members**

Allen, E. W., Milledgeville
Allen, H. D., Jr., Milledgeville
Anderson, John M., The Menninger Clinic, Topeka, Kan.
Anderson, S. A., Milledgeville
Bailey, L. A., Milledgeville
Binion, Richard, Milledgeville
Bostick, W. A., Milledgeville
Bradford, R. W., Milledgeville
Cary, H. R., Milledgeville
Chesnutt, T. H., Milledgeville
Clodfelter, Thos. C., Milledgeville
Combs, Joe D., Milledgeville
Cox, C. G., Veterans Hospital, Dublin
Crichton, Robert B., Milledgeville
Echols, Geo. L., Milledgeville
Fernan-Nunez, M., Milledgeville
Fulghum, C. B., Milledgeville
Garrard, J. L., Milledgeville
Mitchell, Frank B., Sr., Crescent
Peacock, Thos. G., Milledgeville
Pennington, L. E., Milledgeville
Pennington, Veronica M., Milledgeville
Schwall, Edward W., Gracewood
Sikes, Walter A., Valley Forge Gen. Hospital, Phoenixville, Pa.
Sikes, Z. S., Fairfield State Hospital, Newtown, Conn.
Smith, M. E., Milledgeville
Walker, E. Y., Milledgeville
Waller, C. P., Milledgeville
Wiley, John D., Milledgeville
Williams, David C., Jr., Milledgeville
Woods, O. C., Milledgeville
Yarbrough, Y. H., Milledgeville

### BARTOW COUNTY

**Officers**

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Vice-President.. Quillian, Wm. B., Jr.
Secretary-Treasurer..... Horton, A. L.
Delegate ..... Cauble, George
Censors: Bradford, H. B.; Howell, S. M., and Quillian, Wm. B., Jr.

**Members**

Adair, R. E., Cartersville (Hon.)
Bradford, H. B., Cartersville
Horton, A. L., Cartersville
Howell, S. M., Cartersville
McGowan, Hugh S., Cartersville
Quillian, Wm. B., Jr., Cartersville
Stanford, J. W., Cartersville
Wofford, W. E., Cartersville

### BEN HILL COUNTY

**Officers**

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Vice-President ..... Smith, J. E.
Secretary-Treasurer.. Cornwell, G. K.
Delegate ..... Smith, J. E.
Alternate Delegate.. Harris, Raymond

**Members**

Bradley, T. E., Fitzgerald
Coffee, W. P., Fitzgerald
Cornwell, G. K., Fitzgerald
Harper, A., Wray (Hon.)
Harris, Raymond, Ocilla
Johnson, Roy J., Jr., Fitzgerald
McMillan, J. E., Fitzgerald
Smith, J. E., Fitzgerald
Ward, Francis O., Fitzgerald
Ware, D. B., Fitzgerald
Willcox, W. D., Fitzgerald
Willis, G. W., Ocilla

### BIBB COUNTY

**Officers**

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President-elect Richardson, C. H., Jr.
Vice-President ..... Keen, O. F.
Secretary-Treasurer.. Phillips, A. M.
Delegate..... Applewhite, J. D.
Delegate ..... Kay, J. B.
Alternate Delegate..... Wasden, C. N.
Alternate Delegate..... Baxley, W. W.

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Anderson, J. C, Persons Bldg., Macon
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Atkinson, H. C., 700 Spring St., Macon
Barton, William L., Persons Bldg., Macon
Bashinski, Ben, 700 Spring St., Macon
Baxley, W. W., Persons Bldg., Macon
Bazemore, W. L., 553 Walnut St, Macon
Billinghurst, George A., Persons Bldg., Macon
Blum, Leon J., Jr., Warner Robins
Boswell, W. Chas., Persons Bldg., Macon
Branan, Fred H., Clinic Hospital, Macon
Brannen, Edmund A., 700 Spring St., Macon
Brown, Roland A., 553 Walnut St., Macon
Bush, W. Holloway, Bibb Bldg, Macon
Camp, J. A., Roberta
Carroll, George F., Veterans Administration, Macon (Asso.)
Cary, R. Frank, 815 Hemlock St., Macon
Chrisman, W. W., 700 Spring St., Macon
Clay, J. Emory, Clinic Hospital, Macon
Cole, Allan A., 810 Mulberry St., Macon
Cooper, Chas. F., Persons Bldg, Macon
Corn, Ernest, 700 Spring St., Macon
Dove, W. B., 135 Boulevard Ave., Macon (Hon.)
DuPree, George W., Gordon
DuPree, John T., Gordon
Edenfield, R. W., 700 Spring St., Macon
Farmer, C. Hall, 553 Walnut St., Macon
Gallemore, John L., Perry
Goldstein, J. J., Warner Robins
Golsan, W. R., Persons Bldg., Macon
Goodman, Leon J., Bibb Bldg., Macon
Goolsby, R. C., 700 Spring St., Macon
Hall, J. L., Bankers Bldg., Macon
Hall, T. H., Grand Bldg., Macon
Hanson, J. Fletcher, 129 The Prado, Macon
Harrold, C. C., 700 Spring St., Macon (deceased)
Harrold, Thomas, 700 Spring St., Macon
Hatcher, Milford B., 700 Spring St., Macon
Hazlehurst, W. Derrell, 765 Spring St., Macon
Holmes, J. P., Persons Bldg., Macon
Houser, Frank M., Grand Bldg., Macon
Hurley, Thos. A., Clinic Hospital, Macon
James, L. P., 700 Spring St., Macon
Jarratt, W. D., 553 Walnut St., Macon
Johnson, Geo. L., VA Regional Office, Montgomery, Ala.
Johnson, J. E. L., Roberta
Jones, John P., 853 Hemlock St., Macon
Jordan, William K., 700 Spring St., Macon
Kay, J. B., Byron
Keen, O. F., Persons Bldg., Macon
King, J. L., Persons Bldg., Macon
Mass, Max, Macon Hospital, Macon
Massenburg, G. Y., Clinic Hospital, Macon
Mays, J. R. S., 700 Spring St., Macon
McAfee, L. C., 618 Forsyth St., Macon (Hon.) (deceased)
McAllister, Robert W., 700 Spring St., Macon

McLaughlin, C. K., Bankers Bldg., Macon
McMichael, V. H., Clinic Hospital, Macon
McMillan, E. C., Bibb Bldg., Macon
Meriwether, W. W., Persons Bldg., Macon
Mobley, W. E., 563 College St., Macon
Nathan, Daniel E., Fort Valley
Neuberg, S. Charlotte, 722 Spring St., Macon
Newman, W. A., 700 Spring St., Macon
Newton, Ralph G., Persons Bldg., Macon
Patton, Samuel E., Persons Bldg., Macon
Penington, C. L., Nottingham Drive, Macon
Phillips, A. M., Bankers Bldg., Macon
Pope, Edgar M., 700 Spring St., Macon
Porch, Leon D., 700 Spring St., Macon
Prescott, E. H., Health Dept., Macon
Rawls, Lewis L., Persons Bldg., Macon
Reifler, R. M., First Natl. Bank Bldg., Macon
Richardson, C. H., 700 Spring St., Macon
Richardson, C. H., Jr., 700 Spring St., Macon
Richardson, R. W., Persons Bldg., Macon
Ridley, C. L., Macon Hospital, Macon
Ridley, C. L., Jr., Macon Hospital, Macon
Rogers, T. E., 120 Clisby Place, Macon (Hon.)
Ross, Thos. L., 700 Spring St., Macon
Rozar, A. R., Shirley Hills, Macon (Hon.)
Rubin, Samuel N., Gordon
Rumble, Charles T., 700 Spring St., Macon
Siegel, A. E., 553 Walnut St., Macon
Smith, Horace D., 10519 Ohio Ave., Los Angeles 25, Calif.
Smith, J. Allen, 700 Spring St., Macon
Stewart, J. Benham, 700 Spring St., Macon
Suarez, Raymond, 553 Walnut St., Macon
Swilling, Evelyn, 553 Walnut St., Macon
Thompson, O. R., 700 Spring St., Macon
Tift, Henry H., Persons Bldg., Macon
Vinson, Frank, Fort Valley
Walker, D. D., 700 Spring St., Macon
Ward, J. B., 130 Ft. Hill St., Macon
Ware, Ford, Bankers Bldg., Macon
Wasden, C. N., Bankers Bldg., Macon
Watson, Edwin R., 553 Walnut St., Macon
Weaver, H. G., 700 Spring St., Macon
Weaver, Olin H., 700 Spring St., Macon
Webb, Fred L., VD Control Clinic, Nashville City Health Dept., Nashville, Tenn.
Williams, W. A., 700 Sprnig St., Macon
Wood, James A., 214 Vineville Ave., Macon
Work, Samuel D., Jr., 853 Hemlock St., Macon
Zachary, J. D., Gray

## BLUE RIDGE SOCIETY

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Vice-President ..... O'Daniel, John Y.
Secretary-Treas. ..... O'Daniel, James F.
Delegate ..... Burdine, James M.
Censors: Burdine, Winston E.; Hicks, Thomas J., and Watkins, Edward W.

### Members

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Burdine, Winston E., Blue Ridge
Carswell, Bowdre L., Hiawassee
Edge, H. M., Blairsville
Hicks, Thomas J., McCaysville
O'Daniel, James F., Ellijay
O'Daniel, John Y., Ellijay
Rogers, W. H., Young Cane
Shanks, Edgar D., Jr., U. S. Army, Far East Command (Asso.)
Watkins, Edward W., Ellijay
West, E. M., Oliver General Hospital, Augusta (Asso.)

## BROOKS COUNTY

### Officers

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Vice-President ..... Wasden, Harry A.
Sec.-Treas. ..... Thwaite, Walter G.
Delegate ..... Jones, A. B., Jr.
Alternate Delegate ..... Smith, L. A.
Censors: Jones, A. B., Jr., and Smith, L. A.

### Members

Jones, A. B., Jr., Quitman
Smith, L. A., Quitman
Thwaite, Walter G., Quitman
Wasden, Harry A., Quitman
Wasden, Howell A., Jr., Pavo

## BULLOCH-CANDLER-EVANS COUNTIES

### Officers

President ..... Griffin, Louie H.
V-President ..... Mitchell, Frank B., Jr.
Secretary-Treas. ..... Hames, Curtis G.
Delegate ..... Whiteside, J. H.
Alternate Delegate ..... Simmons, W. E.
Censors: Floyd, W. E.; Simmons, W. E., and Whiteside, J. H.

### Members

Alderman, H. A., Portal (deceased)
Daniel, A. B., Statesboro
Daniel, J. W., Claxton
Deal, B. A., Statesboro
Fletcher, Elizabeth, Statesboro
Floyd, W. E., Statesboro
Griffin, Louie H., Claxton
Hames, Curtis G., Claxton
Kennedy, R. L., Metter
McElveen, J. M., Brooklet
Mitchell, Frank B., Jr., Metter
Mooney, John, Jr., Statesboro
Moore, Ed L., Statesboro
Nevil, J. L., Metter
Olliff, H. H., Register
Simmons, W. E., Metter
Stapleton, C. E., Statesboro
Stewart, James A., Portal
Waters, Aubrey J., Statesboro
Watkins, E. C., Brooklet
Whiteside, J. H., Statesboro

## BURKE COUNTY

### Officers

President ..... McCarver, W. C.
Vice-President ..... Lowe, W. R.
Secretary-Treasurer ..... Green, C. G.
Delegate ..... Butterfield, D. L.
Alternate Delegate ..... Byne, J. M., Jr.

### Members

Bargeron, E. A., Waynesboro
Bent, H. F., Midville
Butterfield, D. L., Waynesboro
Byne, J. M., Jr., Waynesboro
Green, C. G., Waynesboro
Hillis, W. W., Sardis
Lowe, W. R., Midville
McCarver, W. C., Vidette

## CARROLL-DOUGLAS HARALSON COUNTIES

### Officers

President ..... Reese, D. S.
Vice-President ..... Hamilton, R. E.
Secretary-Treas. ..... Downey, Wm. P.
Delegate ..... Scales, S. F.
Alternate Delegate ..... Allen, C. H.

### Members

Aderholt, W. A., Carrollton
Allen, C. H., Bremen
Bagley, D. A., Austell
Barker, H. L., Carrollton
Berry, Robert L., Villa Rica
Bray, Adolphus, Jr., Buchanan
Brock, W. B., Tallapoosa (Hon.)
Bussey, J. G., Austell
Denney, Roy L., Carrollton
Downey, Wm. P., Tallapoosa
Eaves, B. F., Draketown (Hon.)
Hamilton, R. E., Douglasville
Hogue, W. L., Villa Rica
Holtz, Louis, Carrollton
Hutcheson, E. B., Union Hill Rd., Moorestown, N. J. (Hon.)
King, O. D., Bremen
Morgan, F. W., Douglasville
Nutt, J. J., Bowdon
Parham, J. B., Tallapoosa
Patrick, E. V. Carrollton
Powell, B. C., Villa Rica
Powell, John E., Villa Rica
Powell, John E., Jr., Villa Rica
Pritchett, J. H., Jr., Bremen
Reese, D. S., Carrollton
Roberts, O. W. Carrollton
Scales, S. F., Carrollton
Smith, W. P., Bowdon
Spruell, T. M., Temple (Hon.)
Taylor, A. N., Bowdon
Taylor, T. B., Douglasville
Thomasson, W. E., Carrollton
Vansant, C. V., Douglasville
Watts, J. W., Bowdon
Wilson, L. E., Bowdon
Worthy, W. Steve, Carrollton

## GEORGIA MEDICAL SOCIETY (Chatham County)

### Officers

President ..... Epting, M. J.
Vice-President ..... Dunn, Lawrence, B.
Secretary-Treas. ..... Lange, Stephen J.
Delegate ..... Touchton, G. L.
Delegate ..... Elliott, John L.

Alternate Delegate..McGee, Harry H.
Alternate Delegate.....King, Ruskin
Censors: Long, W. V.; Metts, J. C., and Touchton, G. L.

**Members**

Baker, J. O., 126 E. Oglethorpe Ave., Savannah
Bedingfield, W. O., 14 W. Hull St., Savannah
Bowden, Ralph O., 24 W. Gaston St., Savannah
Broderick, J. R., 415 Abercorn St., Savannah
Brown, C. T., Guyton
Brown, F. B., 22 W. Gaston St., Savannah
Brown, Walter E., 14 W. Hull St., Savannah
Center, Abraham H., 17-A W. Gordon St., Savannah
Charlton, T. J., 220 E. Oglethorpe Ave., Savannah
Chrisholm, J. F., 512 Abercorn St., Savannah
Cluxton, Horace H., 124 E. Jones St., Savannah
Cole, W. A., 32 E. Taylor St., Savannah
Compton, H. T., 17 E. Jones St., Savannah
Coward, Allen W., 17 E. Jones St., Savannah
Craig, James B., 19½ W. Gordon St., Savannah
Crawford, W. B., 14 E. Taylor St., Savannah
Crawford, W. B., Jr., 14 E. Taylor St., Savannah
Dancy, W. R., 104 W. Jones St., Savannah
Daniel, J. W., 5 E. Jones St., Savannah
Daniel, John W., Jr., 5 E. Jones St., Savannah
Davis, Claude L., Hinesville
deCaradeuc, St. J. R., DeRenne Apts., Savannah
Demmond, E. C., DeRenne Apts., Savannah
Donlan, Charlotte A., 612 Drayton St., Savannah
Drane, Robert, DeRenne Apts., Savannah
Dunn, L. B., 114 E. Gaston St., Savannah
Eagan, M. J., 210 E. Liberty St., Savannah
Elliott, John L., 212 E. Huntingdon St., Savannah
Epting, M. J., 12 W. Jones St., Savannah
Faggart, G. H., 18 W. Oglethorpe Ave., Savannah
Fillingim, D. B., 118 E. Jones St., Savannah
Fleming, Paul N., 14 W. Taylor St., Savannah
Frech, Henry C., 423 Bull St., Savannah
Freedman, L. M., 101½ E. Gordon St., Savannah
Fulmer, Wm. Henry, 19 E. 34th St., Savannah
Gleaton, E. N., 2 E. Jones St., Savannah.
Graham, R. E., 212 E. Gaston St., Savannah
Ham, O. Emerson, 12 W. Jones St., Savannah
Holloman, Alfred L., 119 E. Jones St., Savannah.
Holton, C. F., DeRenne Apts., Savannah
Hopkins, Anne, 22 E. Jones St., Savannah
Howard, Lee, DeRenne Apts., Savannah
Iseman, E., 103 E. Jones St., Savannah
Johnson, G. H., 116 E. Oglethorpe Ave., Savannah
Jones, Jabez, 11 W. Gordon St., Savannah
Kandel, H. M., 423 Abercorn St., Savannah
Kanter, W. W., 345 Bull St., Savannah
Kelley, Albert J., 4 E. Taylor St., Savannah
King, Ruskin, 10 W. Taylor St., Savannah
Lang, G. H., 202 E. Liberty St., Savannah
Lange, Stephen J., 12 E. Taylor St., Savannah
Lawless, Thomas F., 204 E. Liberty St., Savannah
Lee, Lawrence, DeRenne Apts., Savannah
Levington, H. L., 209 E. Gaston St., Savannah
Long, W. V., Hotel DeSoto, Savannah
Lott, Oscar H., 111 E. Jones St., Savannah
Lynn, S. C., 124 E. Jones St., Savannah
Maner, E. N., 4 W. Liberty St., Savannah
Martin, R. V., 10 W. Jones St., Savannah
Massoud, M. A., Pineora
Mazo, Milton M., 8 E. Taylor St., Savannah
McGee, Harry H., 7 W. Gordon St., Savannah
Metts, James C., 427 Bull St., Savannah
Morrison, Howard J., 444 Drayton St., Savannah
Neville, R. L., 11 W. Gordon St., Savannah
Norton, W. A., 105 E. Oglethorpe Ave., Savannah
Oliver, R. L., DeRenne Apts, Savannah
Olmstead, G. T., 20 E. Taylor St., Savannah
O'Neill, J. C., 202 E. Liberty St., Savannah
Osborne, E. S., 19 E. Jones St., Savannah
Osteen, W. L., 610 Anderson Ave., Savannah
Pacifici, Joseph, 2 E. Taylor St., Savannah
Peterson, T. A., 11 W. Jones St., Savannah
Pinholster, J. H., 241 Abercorn St., Savannah
Porter, J. E., 128 E. Taylor St., Savannah
Portman, Henry J., 9 E. Gordon St., Savannah
Powers, Leander K., 409 Drayton St., Savannah
Prince, Charles L., 15 E. Gordon St., Savannah
Quattlebaum, J. K., 24 W. Gaston St., Savannah
Rabhan, L. J., 314 E. Gaston St., Savannah
Redmond, C. G., 701 Whitaker St., Savannah
Redmond, C. R. A., 530 E. 49th St., Savannah
Righton, H. Y., 101 E. Waldberg St., Savannah
Robinson, David, 104 E. Taylor St., Savannah
Rosen, E. F., 5 E. Gordon St., Savannah
Rosen, Samuel F., 4 E. Jones St., Savannah
Rubin, Jacob, 350 Bull St., Savannah
Sax, Charles E., 19 W. Liberty St., Savannah
Schneider, M. M., 12½ W. Taylor St., Savannah
Sharpley, Helen, 109 E. Jones St., Savannah
Sharpley, H. F., Jr., DeRenne Apts., Savannah
Sharpley, John G., DeRenne Apts., Savannah
Shaw, L. W., 124 E. Oglethorpe Ave., Savannah
Shearhouse, J. Wm., 14 E. Taylor St., Savannah
Smith, H. M., 9 W. Gordon St., Savannah
Smith, P. H., 3 E. Gordon St., Savannah
Stalvey, John K., Jr., 110 E. Taylor St., Savannah
Touchton, G. L., 114 E. Jones St., Savannah
Train, J. K., 1107 Bull St., Savannah
Train, J. K., Jr., 1107 Bull St., Savannah
Upson, E. T., 201 E. Hall St., Savannah
Usher, Charles, 6 E. Liberty St., Savannah
Victor, Jules, Jr., 126 E. Taylor St., Savannah
Waring, A. J., DeRenne Apts., Savannah
Waring, A. J., Jr., DeRenne Apts., Savannah
Westerfield, C. W., 2044 Forrest St., Savannah
Whalen, E. J., 14 W. Jones St., Savannah
Williams, A. F., 127 E. Gordon St., Savannah
Williams, L. W., 105 E. Jones St., Savannah
Wilson, W. D., 315 Abercorn St., Savannah
Youngblood, Samuel, Jr., 108 E. Taylor St, Savannah

### CHATTOOGA COUNTY

#### Officers

President ..... Hyden, Wm. U.
Vice-President ..... Holbrook, H. P.
Secretary-Treasurer ..... Gist, Wm. T.
Delegate ..... Allen, John J.

#### Members

Allen, John J., Summerville
Brown, Herman D., Summerville
Gist, Wm. T., Summerville
Hair, W. B., Summerville
Holbrook, Howell P., Summerville
Hyden, Wm. U., Trion
Lawrence, Dan S., Menlo
Little, G. H., Trion
Little, R. N., Summerville

### CHEROKEE-PICKENS COUNTIES

#### Officers

President ..... Roper, C. J.
Vice-President ..... Pettit, John T.
Sec.-Treas. ..... Jones, Robert T., III
Delegate ..... Hendrix, Arthur M.
Alternate Delegate ..... Roper, E. A.
Censors: Brooke, George C.; Andrews, Charles R., Jr., and Roper, E. A.

#### Members

Andrews, Charles R., Jr., Canton
Brooke, George C., Canton
Coker, Grady N., Canton
Hendrix, Arthur M., Canton
Hendrix, M. Gordon, Ball Ground
Jones, Robert T., III, Canton
Looper, Ben K., Canton
Moore, R. M., Waleska (Hon.)
Pettit, J. T., Canton
Roper, C. J., Jasper
Roper, E. A., Jasper
Scofield, I. F., Tate
Vansant, T. J., Woodstock

### CLARKE COUNTY
### (Clarke-Madison-Oconee Counties)

#### Officers

President ..... Cabaniss, W. H.
Vice-President ..... Neighbors, J. B., Jr.
Secretary-Treasurer ..... Byrd, G. H.
Delegate ..... Green, James A., Jr.
Alternate Delegate ..... Harris, H. B.

#### Members

Barner, John L., Athens General Hospital, Athens
Bond, D. R., Danielsville
Brown, W. W., City Hall, Athens
Bryant, C. H., Comer
Burroughs, William F., Danielsville
Byrd, H. G., 128½ College Ave., Athens
Cabaniss, W. H., Southern Mutual Bldg., Athens
Dover, Tom A., 390 N. Milledge Ave., Athens
Erwin, Goodloe Y., 130 W. Hancock Ave., Athens
Florence, Lorec, Southern Mutual Bldg., Athens
Gallis, Anthony H., Georgian Hotel, Athens
Gerdine, Linton, Southern Mutual Bldg., Athens
Goldsmith, Lauren H., 390 N. Milledge Ave., Athens
Green, James A., Jr., 390 N. Milledge Ave., Athens
Harris, H. B., Southern Mutual Bldg., Athens
Harrison, W. B., City Health Dept., Athens
Holliday, Henry C., Southern Mutual Bldg., Athens
Hubert, M. A., Southern Mutual Bdlg., Athens
Hunnicutt, John A., Southern Mutual Bldg., Athens
Maxwell, Edgar J., Jr., Gilbert Mem. Hospital, Athens
McPherson, John H. T., 468 N. Milledge Ave., Athens
Middlebrooks, C. O., Athens (Hon.)
Moss, W. L., Southern Mutual Bldg., Athens (Hon.)
Mullins, DeWitt F., Jr., St. Mary's Hospital, Athens
Neighbors, J. B., Jr., Southern Mutual Bldg., Athens
Patton, Lewis S., Southern Mutual Bldg., Athens
Randolph, Rivington H., 130 W. Hancock Ave., Athens
Simpson, John A., Southern Mutual Bldg., Athens
Talmadge, Harry E., Southern Mutual Bldg., Athens
Talmadge, Sam M., Southern Mutual Bldg., Athens
Veale, Emory O., Arnoldsville
Westbrook, R. J., Ila (deceased)
Whelchel, G. O., Southern Mutual Bldg., Athens
Whitley, L. L., 234 College Ave., Athens

### CLAYTON-FAYETTE COUNTIES

#### Officers

President ..... Wallis, J. R.
Vice-President ..... Robak, J. L.
Secretary-Treasurer ..... Busey, T. J.
Delegate ..... Coleman, Y. R.

#### Members

Busey, T. J., Fayetteville
Coleman, Y. R., Fayetteville
Robak, J. L., Jonesboro
Wallis, J. R., Lovejoy

### COBB COUNTY

#### Officers

President ..... Crawley, Walter G.
Vice-President ..... Colquitt, Alfred, Jr.
Secretary-Treasurer ..... Benson, Wm. H.
Delegate ..... Garrett, Luke, Jr.
Alternate Delegate ..... Fowler, R. W.
Censors: Fowler, A. H.; Hagood, G. F., and McCall, M. N., Jr.

#### Members

Benson, Earl B., Marietta
Benson, Wm. H., Marietta
Burleigh, Bruce D., Marietta
Busch, John F., Jr., Marietta
Butner, John H., Powder Springs
Cauble, Geo. G., Acworth
Clark, F. B., Austell
Colquitt, Alfred, Jr., Marietta
Colquitt, Hugh S., Smyrna
Crawley, Walter G., Marietta
Davis, E. S., Acworth
Ellis, J. W., Kennesaw
Fowler, A. H., Marietta
Fowler, R. W., Marietta
Garland, Charles M., Smyrna
Garrett, Luke G., Jr., Austell
Gober, W. Mayes, Marietta
Hagood, G. F., Marietta
Hagood, M. M., Marietta
Lester, J. E., Marietta
Lindley, F. P., Powder Springs
McCall, M. N., Jr., Acworth
Mitchell, W. C., Smyrna
Musarra, E. A., Marietta
Perkinson, W. H., Marietta
Robinson, Joe S., Dallas
Teem, Martin Van B., Marietta
Welch, L. L., Marietta (deceased)

### COFFEE COUNTY

#### Officers

President ..... Ricketson, George M.
Vice-President ..... Harper, Sage
Secretary-Treasurer ..... Joiner, H. G.
Delegate ..... Jardine, Dan A.
Alternate Delegate ..... Harper, Sage
Censor: Clark, T. H.

#### Members

Clark, T. H., Douglas
Fussell, J. K., Douglas
Goodwin, H. J., Douglas
Harper, Sage, Douglas
Jardine, Dan A., Douglas
Johnson, R. L., Douglas
Joiner, H. G., Douglas
Morris, J. E., Moultrie
Quillian, B. O., Douglas
Ricketson, George M., Douglas
Shellhouse, L. H., Willacoochee
Silver, Max I., Veterans Admin. Hospital, Waco, Texas
Wallace, J. W., Douglas

### COLQUITT COUNTY

#### Officers

President ..... Joiner, R. M.
Vice-President ..... McCoy, John F.
Secretary-Treas. ..... Conger, Preston D.
Delegate ..... Woodall, J. B.
Alternate Delegate ..... Gay, F. M.
Censors: Brannen, Cecil N.; Stegall, Robert E., and Paulk, James R.

#### Members

Brannen, C. C., Moultrie
Brannen, Cecil N., Moultrie
Conger, Preston D., Moultrie
Fokes, Robert E., Jr., Moultrie
Funderburk, A. G., Moultrie
Gay, F. M., Moultrie
Joiner, R. M., Moultrie
Lanier, J. E., Moultrie
Lawson, E. L., Moultrie
McCoy, John F., Moultrie
McGinty, W. R., Moultrie
Paulk, James R., Moultrie
Slocumb, C. B., Doerun
Stegall, Robert E., Moultrie
Withers, Samuel M., Jr., Moultrie
Woodall, J. B., Moultrie

### COLUMBIA COUNTY

#### Members

Saggus, John Gordon, Harlem
Weeks, J. L., Harlem

### COWETA COUNTY

#### Officers

President ..... Glover, H. C., Jr.
Vice-President ..... Parks, Joseph W., Jr.
Secretary-Treasurer ..... Arnold, J. H.
Delegate ..... Glover, H. C., Jr.
Alt. Delegate ..... Hammond, G. W.

#### Members

Arnold, J. H., Newnan
Barksdale, C. R., Jr., Grantville
Bryant, J. M., Jr., Newnan
Cochran, M. F., Newnan
Elliott, C. C., Sargent
Farmer, Chas. W., Jr., Newnan

Glover, H. C., Jr., Newnan
Hammond, G. W., Newnan
Jackson, Bruce, R.F.D. 5, Newnan
Kinnard, George P., Newnan
McDonald, R. H., Newnan
Meaders, H. D., Newnan
Parks, Joseph W., Jr., Newnan
Peniston, Joe B., Newnan
St. John, James O., Newnan
Tanner, W. H., Route 2, Newnan
Tribble, J. M., Senoia
Woodroof, Wm. L., Newnan

### CRISP COUNTY
#### Officers

President—McArthur, C. E.
Secretary-Treas.—Gower, O. T., Jr.
Delegate—Williams, P. L.
Alternate Delegate—McArthur, C. E.

#### Members

Adams, Charles, Cordele
Dorminy, J. N., Cordele (Hon.)
Flournoy, H. C., Warwick
Gower, O. T., Jr., Cordele
Harwell, C. W., Cordele
McArthur, C. E., Cordele
Snelling, John M., Jr., Lowell Gen. Hospital, Lowell, Mass.
Whelchel, A. J., Cordele
Williams, H. J., Cordele
Williams, L. E., Cordele
Williams, P. L., Cordele
Williams, P. L., Jr., Cordele
Wootten, L. O., Cordele

### DECATUR-SEMINOLE COUNTIES
#### Officers

President—Epps, George L.
Vice-President—Polk, James W.
Secretary-Treasurer—Ehrlich, M. A.
Delegate—Wheat, R. F.
Alternate Delegate—Welch, Carl B.

#### Members

Baxley, Harry B., Donalsonville
Bellville, Chas. G., Bainbridge
Bridges, E. C., Donalsonville
Bridges, Henry A., Bainbridge
Chason, Gordon, Bainbridge
Ehrlich, M. A., Bainbridge
Epps, George L., Bainbridge
Fort, M. A., Bainbridge
Jenkins, H. B., Donalsonville
Moseley, E. E., Donalsonville
Polk, James W., Donalsonville
Spooner, John L., Donalsonville (Hon.)
Tucker, John P., Bainbridge
Welch, Carl B., Attapulgus
Wheat, R. F., Bainbridge
Wilkinson, W. L., Bainbridge
Willis, L. W., Bainbridge

### DeKALB COUNTY
#### Officers

President—McGeachy, T. E.
Vice-President—Cunningham, C. E.
Sec.-Treas.—Matthews, Lawrence P.
Delegate—Allen, Homer H.
Alt. Delegate—Cunningham, C. E.

#### Members

Allen, Homer H., 520 Church St., Decatur
Allgood, C. L., Scottdale
Ansley, R. B., 121 Clairmont Ave., Decatur
Beck, John E., 356 W. Ponce de Leon Ave., Decatur
Blincoe, Homer, 1 E. 105th St., New York 29, N. Y.
Christian, Wm. H., Jr., 1690 Pine Ridge Dr., N. E., Atlanta
Cunningham, C. E., Masonic Temple Bldg., Decatur
Duncan, G. A., Masonic Temple Bldg., Decatur
Evans, J. Rufus, 120 Clairmont Ave., Decatur
Kerr, Wm. K., Chamblee
Leslie, John T., 121 Clairmont Ave., Decatur
Litton, J. H., Tucker
Matthews, Lawrence P., 1282 S. Oxford Rd., N. E., Atlanta
McGeachy, T. E., 520 Church St., Decatur
Mendenhall, W. A., Chamblee
Morse, Chester W., 356 E. Ponce de Leon Ave., Decatur
Powell, F. C., 319 Church St., Decatur
Saunders, Floyd R., Jr., Masonic Temple Bldg., Decatur
Smith, W. P., 319 Church St., Decatur
Stewart, Thos. W., Lithonia
Sweet, Mary F., 165 S. Candler St., Decatur (Hon.)
Vogt, Elkin, Lithonia
Williams, David C., 216 Sycamore Dr., Decatur

### DOOLY COUNTY
#### Officers

President—Daves, V. C.
Secretary-Treas.—Malloy, Martin L.
Delegate—Kitchens, O. W.

#### Members

Bishop, L. H., Unadilla
Coleman, Otha K., Vienna
Daves, V. C., Vienna
Davis, E. B., Byromville
Dean, Harry B., Unadilla
Kitchens, O. W., Byromville
Malloy, Martin L., Vienna
Mobley, H. A., Vienna (Hon.)

### DOUGHERTY COUNTY
#### Officers

President—James, A. E.
Vice-President—Seymour, G. E.
Secretary-Treas.—Russell, Paul T.
Delegate—Feild, W. M.
Alternate Delegate—Cook, W. S.
Censors: Redfearn, J. A.; Barnett, J. M., and Keaton, J. C.

#### Members

Armstrong, Edward S., Albany
Barnett, J. M., Albany
Berg, Joseph L., Albany
Bowman, M. B., Albany
Buckner, Frank W., Albany
Cole, Thomas M., Albany
Cook, W. S., Albany
Feild, W. M., Albany
Hilsman, P. L., Albany
Holman, C. M., Albany
Ingram, Lillian, Albany
Irvin, I. W., Albany
James, A. E., Albany
Keaton, J. C., Albany
Lucas, I. M., Albany
Mann, D. S., Albany
McDaniel, J. Z., Albany
McKemie, H. M., Albany
McKemie, W. Frank, Albany
Neill, F. K., Albany
Redfearn, J. A., Albany
Rhyne, W. P., Albany
Roberson, P. E., Albany
Russell, Paul T., Albany
Seymour, G. E., Albany
Sutton, J. Mack, Jr., Albany
Thomas, Frank E., Albany
Thomas, N. E., Albany
Tye, J. P., Albany
Wolfe, David M., Albany

### ELBERT COUNTY
#### Officers

President—Johnson, J. E., Jr.
Vice-President—Thompson, D. N.
Sec.-Treas.—O'Neal, John B., III
Delegate—Johnson, A. S.
Alternate Delegate—Smith, F. A.
Censors: Johnson, A. S.; Ward, G. A., and Johnson, W. A.

#### Members

Bailey, D. V., Elberton
Gaines, T. H., Elberton
Johnson, A. S., Elberton
Johnson, A. S., Jr., Elberton
Johnson, J. E., Elberton (Hon.)
Johnson, J. E., Jr., Elberton
Johnson, W. A., Elberton
Mattox, B. B., Elberton (Hon.)
Mickel, Carey A., Jr., Elberton
O'Neal, John B., III, Elberton
O'Neal, Phyllis J., Elberton
Smith, A. C., Elberton
Smith, F. A., Elberton
Thompson, D. N., Elberton
Ward, G. A., Elberton

### EMANUEL COUNTY
#### Officers

President—Youmans, S. S.
Vice-President—Brown, R. G.
Secretary-Treasurer—Smith, H. W.
Delegate—Powell, C. E.
Alternate Delegate—Brown, R. G.
Censors: Youmans, S. S.; Brown, R. G., and Powell, C. E.

#### Members

Brown, R. G., Swainsboro
Powell, C. E., Swainsboro
Smith, D. D., Swainsboro
Smith, H. W., Swainsboro
Youmans, S. S., Swainsboro

### FLOYD COUNTY
#### Officers

President—Gilbert, Warren M.
Vice-President—McCall, J. T., Jr.
Secretary-Treasurer Davis, Ralph J.
Delegate—Battle, Lee H., Jr.
Alt. Delegate—Gilbert, Warren M.
Censors: McCord, Ralph B.; Norton, Robert F., and Cheney, G. W. Holmes

#### Members

Banister, W. G., R.F.D. 2, Rome (Hon.)
Battle, Lee H., Jr., Rome
Blalock, Frank A., Battey State Hospital, Rome
Bosworth, Ed R., Rome
Brannon, Emmett, Rome
Brzozowski, Grover S., Southwestern Sanatorium, Tampa, Fla.
Cagle, W. D., Rome
Chandler, J. L., Rome (Hon.)
Chaney, G. W., Holmes, Rome (deceased)
Chesnut, John L., Battey State Hospital, Rome
Crenshaw, Fred, Battey State Hospital, Rome
Crow, H. E., Battey State Hospital, Rome
Davis, Ralph J., Rome

Dawson, Harry, Shannon
Dellinger, A. H., Rome
Dellinger, Raiden W., Rome
Elmore, B. V., Rome
Garner, J. S., Jr., Rome
Garrard, J. L., Rome
Gilbert, Warren M., Rome
Graves, Robert W., Rome
Hackett, Walter G., Rome
Harbin, B. Lester, Rome
Harbin, Robert M., Jr., Rome
Harbin, Thomas S., Rome
Harbin, William P., Jr., Rome
Jenkins, O. W., Lindale
Johnson, Ralph N., Rome
Lewis, William H., Rome
McCall, J. T., Rome
McCall, J. T., Jr., Rome
McCord, M. M., Rome
McCord, Ralph B., Rome
Methvin, S. R., Lindale (Hon.)
Moore, C. W. Cary, Rome
Moore, Clifford, Lindale
Moore, Cliff, Jr., Lindale
Moss, T. H., Rome
Mull, J. H., Rome
Murphy, Charles M., Battey State Hospital, Rome
Nicholson, George T., Battey State Hospital, Rome
Norton, J. H., Jr., Cave Springs
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Johnson, J. A., Manchester
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Bramblett, A. W., Jr., Forsyth
Goolshy, R. C., Forsyth (Hon.)
Lane, George M., Forsyth
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Alternate Delegate.....Wolff, L. H.
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Blanchard, Mercer, 204 11th St., Columbus
Blumstein, Charles L., City Hospital, Columbus
Boyter, Henry H., 204 11th St., Columbus
Brannen, O. C., Murrah Bldg., Columbus
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Bush, John, 1340 4th Ave., Columbus
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Carter, Curtis B., 1545 3rd Ave., Columbus (Hon.)
Chipman, R. A., Swift Bldg., Columbus
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Dykes, A. N., 1229 2nd Ave., Columbus
Edleson, Louis R., First National Bank Bldg., Columbus
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Elder, Ivan R., 1229 2nd Ave., Columbus
Elkins, James A., 1327 3rd Ave., Columbus
Fletcher, H. Quigg, Jr., 1327 3rd Ave., Columbus
Fox, Brent, P. O. Box 422, Columbus
Freeman, Edward R., 313 14th St., Columbus
Gibson, R. L., Murrah Bldg., Columbus
Gilliam, O. D., Doctors Bldg., Columbus
Goss, Joseph J., 821 Cooper St., Columbus
Hutto, George M., City Hospital, Columbus
Jenkins, W. F., 1444 4th Ave., Columbus
Jones, Wm. R., Doctors Bldg., Columbus
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Jordan, W. P., Jr., Doctors Bldg., Columbus
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Land, Polk S., Doctors Bldg., Columbus
Lapides, Leon, Swift Bldg., Columbus
Love, Wm. G., 1312 3rd Ave., Columbus
Luton, Norman S., 516 14th St., Phenix City, Ala.
Mayher, J. W., 1344 2nd Ave., Columbus
Mayher, Will E., 1344 2nd Ave., Columbus
McDuffie, J. H., Jr., 1120 3rd Ave., Columbus
McWhorter, M. R., 313 14th St., Columbus
Moses, Alice, 1413 2nd Ave., Columbus
Munn, E. K., Murrah Bldg., Columbus
Murray, G. S., Swift Bldg., Columbus (Hon.)
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Roberts, Luther J., 240 Martin Bldg., Columbus
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Schnessler, George, 1437 2nd Ave., Columbus
Smith, Chas. R., Doctors Bldg., Columbus
Snelling, W. R., 1315 4th St., Columbus
Stapleton, J. L., 307 11th St., Columbus
Storey, W. E., 1312 3rd Ave., Columbus
Thompson, John B., 1308 3rd Ave., Columbus
Threatte, Bruce, 204 11th St., Columbus
Tidwell, J. T., Doctors Bldg., Columbus
Tillery, Bert, Swift Bldg., Columbus
Venable, D. R., 1722 Stark Ave., Columbus
Walker, John E., 1223 3rd Ave., Columbus
Waller, Roy M., Jr., Murrah Bldg., Columbus
Wallis, H. G., Needham Bldg., Columbus
Willis, J. N., Swift Bldg., Columbus
Winn, J. H., Swift Bldg., Columbus
Wolff, Luther H., 1312 3rd Ave., Columbus
Wooldridge, J. C., Murrah Bldg., Columbus
Youmans, J. R., Doctors Bldgs., Columbus (Hon.)
Young, S. E., Midland (Hon.)

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Mitchell, J. B., Jr., Porterdale
Nesbit, F. C., Covington
Palmer, C. B., Covington
Sams, J. R., Covington
Travis, W. D., Covington (deceased)
Waites, S. L., Covington
Wilson, Pleas, Newborn

## OCMULGEE COUNTY
## (Bleckley-Dodge-Pulaski Counties)

### Officers

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Vice-President.....Holder, Frank P., Jr.
Secretary-Treas.....Thomson, James L.
Delegate.....Jones, Edward G.
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Baker, Wm. R., Hawkinsville
Batts, A. S., Hawkinsville
Bush, Albert R., Hawkinsville
Harp, S. L., Cochran
Holder, Frank P., Jr., Eastman
Jones, Edward G., Eastman
Long, H. W., Eastman
Massey, W. F., Chester
Mayo, J. Palmer, Eastman
Parkerson, I. L., Eastman
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Smith, Richard L., Cochran
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Whipple, R. L., Cochran

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### Officers

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Vice-President.....Elliott, Cecil B.
Secretary-Treas.....Blanchard, Wm. H.
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Alt. Delegate.....White, George M.

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Chandron, P. O., Cedartown
Cooper, J. J., Cedartown
Elliott, Cecil B., Cedartown
Goldin, Harold W., Rockmart
Goldin, Robert B., Rockmart
Good, John W., Cedartown
Griffith, J. E., Rockmart
Hagan, James H., Rockmart
Lucas, W. H., Cedartown
McBryde, T. E., Rockmart
McGehee, John M., Cedartown
Ross, Grace R., Cedartown
Spanjer, Raymond F., Cedartown
Styles, O. R., Cedartown
White, George M., Rockmart
Word, J. J., Cedartown

## RABUN COUNTY

### Members

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Justice, Frank K., Clayton

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### Officers

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Vice-President.....Daniel, Ernest F., Jr.
Secretary-Treasurer.....Elliott, W. C.
Delegate.....Tidmore, J. C.
Alt. Delegate.....Quattlebaum, Robt. B.
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Carter, George Shellman (Hon.)
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Elliott, W. C., Cuthbert
Gary, Loren, Gary
Harper, T. F., Coleman
Kenyon, J. M., Richland (Hon.)
Kenyon, Steve P., Dawson
Lewis, J. H., Dawson (Hon.) (deceased)
Lunsford, J. F., Preston (Hon.) (deceased)
Martin, F. M., Shellman
Martin, Robert B., III, Cuthbert
Martin, Walter D., Shellman
Paschal, J. Dean, Dawson
Patterson, J. C., Cuthbert
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## RICHMOND COUNTY

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Sec.-Treas.....Mulherin, Charles M.
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Delegate.....Wright, George W.
Alt. Delegate.....Agee, M. Preston
Alt. Delegate.....Templeton, C. Monroe

### Members

Agee, M. Preston, 753 Broad St., Augusta
Allen, Lane H., University of Ga. School of Medicine, Augusta
Allgood, Jackson L., University Hospital, Augusta (Asso.)
Bailey, Thomas E., 315 10th St., Augusta
Battey, Colden R., 921 Greene St., Augusta
Battey, W. W., 561 Telfair St., Augusta
Bazemore, J. Malcolm, 868 Hickman Rd., Augusta
Beard, B. C., 739 Greene St., Augusta
Bedingfield, W. R., Southern Finance Bldg., Augusta

Bell, Jack E., 407 7th St., Augusta
Bernard, G. T., 204 13th St., Augusta
Blanchard, George O., Southern Finance Bldg., Augusta
Bowen, J. B., Southern Finance Bldg., Augusta
Boyd, Wm. S., 1020 Greene St., Augusta
Brittingham, John W., 1345 Greene St., Augusta
Brown, John M., University Hospital, Augusta
Brown, Stephen W., University Hospital, Augusta
Brown, T. P., Route 5, Thomasville
Bryans, C. I., 967 Meigs St., Augusta
Burdashaw, James F., Johnson Bldg., Augusta
Burdashaw, Wm. J., 718 Monte Sano Ave., Augusta
Butler, J. H., Southern Finance Bldg., Augusta
Carswell, Augustin S., 224 Telfair St., Augusta
Chandler, John L., University Hospital, Augusta
Chaney, R. H., 1001 Greene St., Augusta
Chartock, Abraham M., University of Georgia School of Medicine, Augusta (Asso.)
Clary, Thomas L., Jr., 1345 Greene St., Augusta
Cleckley, Hervey M., University Hospital, Augusta
Cleve, E. A., U. S. Army, Guam, M. I.
Corbitt, Melvis O., 1309 Holden St., Augusta
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Davis, Abe J., 501 Greene St., Augusta
DeVaughn, N. M., Marion Bldg., Augusta
Dick, Fred, Jr., 1728 Oak Drive, Augusta
Estes, Marion M., University of Ga. School of Medicine, Augusta
Flanagin, Wiley S., University of Ga. School of Medicine, Augusta
Fulghum, Thos. E., Southern Finance Bldg., Augusta
Fuller, Wm. A., 1345 Greene St., Augusta
Gillman, Nathan, Neon, Ky.
Goodwin, T. W., Southern Finance Bldg., Augusta
Gray, J. D., 1345 Greene St., Augusta
Greenblatt, Robert B., University of Ga. School of Medicine, Augusta
Harper, Harry T., Jr., Marion Bldg., Augusta
Harrell, H. P., Southern Finance Bldg., Augusta
Harrison, F. N., 407 7th St., Augusta
Haynsworth, C. H., 210 E. Coffee St., Greenville, S. C.
Henry, C. G., 842 Greene St., Augusta
Hensley, E. A., Gibson
Hitchcock, J. P., 561 Telfair St., Augusta
Hock, Chas. W., University Hospital, Augusta
Holmes, L. P., Southern Finance Bldg., Augusta
Jennings, W. D., Herald Bldg., Augusta
Johnson, Robert W., 1229 Greene St., Augusta
Jones, G. Frank, Jr., University Hospital, Augusta
Kelly, G. Lombard, University of Ga. School of Medicine, Augusta
Kennedy, F. A., 1345 Greene St., Augusta
Kilpatrick, A. J., 407 7th St., Augusta
Kilpatrick, Charles M., Southern Finance Bldg., Augusta
Klemann, C. L., Marion Bldg., Augusta
Krafka, Joseph F., American Oncologic Hospital, Philadelphia, Pa.
Lee, F. Lansing, Southern Finance Bldg., Augusta
Leonard, Robert E., 1001 Greene St., Augusta
LeRoy, Albert G., Southern Finance Bldg., Augusta
Levy, Jack H., 18 S. Whitney St., Hartford 6, Conn.
Levy, M. S., 1428 Peachtree St., N. E., Atlanta
Lewis, S. J., Southern Finance Bldg., Augusta
Lokey, Julian L., University Hospital, Augusta
Major, Robert C., University Hospital, Augusta
Martin, John M., 407 7th St., Augusta.
Massengale, Leonard R., University Hospital, Augusta
Mathews, Marion W., Cincinnati Gen. Hospital, Cincinnati, O.
Mathews, W. E., Southern Finance Bldg., Augusta
May, E. R., Lincolnton
McAfee, John C., 739 Greene St., Augusta
McGahee, R. C., 1345 Greene St., Augusta
McGinty, H. C., 92 Sycamore St., Huntington, W. Va.
Mealing, Henry G., Southern Finance Bldg., Augusta
Mettler, F. A., Columbia University College of Physicians & Surgeons, New York City
Michel, H. M., University Hospital, Augusta
Miller, Abraham, 1345 Greene St., Augusta
Miller, John M., 842 Greene St., Augusta
Milligan, King W., 942 Greene St., Augusta
Mountain, G. W., 432 Telfair St., Augusta
Mulherin, Charles M., 1211 Greene St., Augusta
Mulherin, F. X., 1001 Greene St., Augusta
Mulherin, Philip A., 1211 Greene St., Augusta
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New, James S., University Hospital, Augusta
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Persall, John T., Jr., Southern Finance Bldg., Augusta
Philpot, W. K., 1345 Greene St., Augusta
Phinizy, Irvine, Southern Finance Bldg., Augusta
Phinizy, Thomas, 1343 Greene St., Augusta
Pinson, Harry D., 1741 King Woods Dr., Augusta
Pollock, Byron E., Oliver Gen. Hospital, Augusta (Asso.)
Powell, W. Forrest, University Hospital, Augusta
Price, W. T., Leonard Bldg., Augusta
Pund, Edgar R., University of Ga. School of Medicine, Augusta
Rabun, John B., University Hospital, Augusta (Asso.)
Rhodes, R. L., Southern Finance Bldg., Augusta
Rinker, J. Robert, University Hospital, Augusta
Risteen, W. A., University Hospital, Augusta
Roberts, W. H., 828 Greene St., Augusta
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Schmidt, Henry L., University of Ga. School of Medicine, Augusta
Shepeard, Walter L., University Hospital, Augusta
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Sydenstricker, V. P., University Hospital, Augusta
Templeton, C. Monroe, Southern Finance Bldg., Augusta
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Thigpen, Corbett H., University Hospital, Augusta
Thomas, David R., Jr., Southern Finance Bldg., Augusta
Thurmond, A. G., 623 Greene St., Augusta
Thurmond, J. W., 623 Greene St., Augusta
Timmons, C. C., 415 Milledge Rd., Augusta
Torpin, Richard, University of Ga. School of Medicine, Augusta
Volpitto, Perry P., University Hospital, Augusta
Ward, Charles D., 842 Greene St., Augusta
Watson, W. G., 623 Greene St., Augusta
Weeks, R. B., Southern Finance Bldg., Augusta
Wilcox, A. E., 2715 Bellview Ave., Augusta
Wilkes, W. A., University Hospital, Augusta

Williams, Virgil B., University Hospital, Augusta
Williams, W. J., Southern Finance Bldg., Augusta
Willis, C. H., Southern Finance Bldg., Augusta
Wright, George W., 1345 Greene St., Augusta
Wright, Peter B., University Hospital, Augusta
Wylie, Moffatt H., Southern Finance Bldg., Augusta
Yates, T. M., 1113 Fairview Dr., Columbia, S. C.

### ROCKDALE COUNTY

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**Member**

Griggs, Harvey E., Conyers

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Burns, D. L., Valdosta
Campbell, James L., Jr., Valdosta
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Clements, H. W., Adel
Crozier, G. T., Valdosta
Eldridge, F. G., Valdosta
Farbar, M. E., Valdosta
Gibson, Ira M., Valdosta
Giddens, C. C., Valdosta
Giddens, I. S., Adel
Hutchinson, L. R., Adel
Johnson, A. M., Valdosta
Ketchum, C. W., Valdosta
Little, A. G., Valdosta (deceased)
Little, A. G., Jr., Valdosta
McKey, Earle V., Jr., Valdosta
Mixson, E. Harry, Valdosta
Mixson, J. F., Valdosta
Mixson, J. F., Jr., Valdosta
Oliphant, Jones B., Adel
Owens, B. G., Valdosta
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Parrott, Jesse T., Hahira
Pennington, J. W., Howell
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Peters, James S., Jr., Nashville
Quillian, E. P., Clyattville
Robbins, Allen L., Homerville
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Smith, E. J., Hahira
Smith, J. R., Hahira
Smith, T. H., Valdosta
Stump, Robert L., Jr., Valdosta
Thomas, Frank H., Valdosta
Thompson, E. F., Valdosta
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Turner, W. W., Nashville
Waugh, Wm. C., Nashville
Williams, T. C., Valdosta

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Alternate Delegate Vinson, T. O.
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Barfield, Wm. E., Jackson
Copeland, H. J., Griffin
Copeland, H. W., Griffin
English, R. E. L., Griffin
Floyd, T. J., Jr., Griffin
Forrer, D. A., Griffin
Frye, A. H., Jr., Griffin
Giles, J. T., Griffin
Grubbs, J. H., Molena
Gunter, R. A., Veterans Hospital, Phoenix, Ariz.
Hammond, Robert L., Jackson
Head, D. L., Zebulon
Head, M. M., Zebulon
Howard, I. B., Williamson
Hunt, Kenneth S., Griffin
Jones, Alex P., Griffin
King, Harry C., Griffin
King, Wm. R., Jr., Griffin
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Oshlag, A. M., Griffin
Smaha, Tofey G., Griffin
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Vinson, T. O., Griffin
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### STEPHENS COUNTY

**Officers**

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Vice-President Shiflet, Robert E.
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Delegate Schaefer, W. Bruce
Alt. Delegate Watters, Julian Q.
Censors: Chaffin, E. F.; Singer, Arthur G., Jr., and Watters, Julian Q.

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Chaffin, E. F., Toccoa
Edge, J. H., Toccoa (Hon.)
Good, Wm. H., Jr., Toccoa
Heller, W. B., Toccoa (Hon.)
Henry, Charles M., Toccoa
Isbell, J. E. D., Toccoa
McNelly, Henry H., Toccoa
Schaefer, W. Bruce, Toccoa
Settle, Roy J., Toccoa
Shiflet, Robert E., Toccoa
Simms, John N., Toccoa
Singer, Arthur G., Jr., Toccoa
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### SUMTER COUNTY

**Officers**

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**Members**

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Cheves, L. C., Jr., Montezuma
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Enzor, R. H., Smithville
Fenn, Henry R., Americus
Gatewood, T. Schley, Americus
Logan, J. Colquitt, Plains
McMath, Wm. Bates, Americus
Pendergrass, R. C., Americus
Primrose, A. C., Americus
Robinson, John H., III, Americus
Savage, C. P., Montezuma
Seay, E. Faxton, Marshallville
Smith, Herschel A., Americus
Thomas, Russell B., Americus
Wilson, Frank A., III, Leslie
Wise, B. T., Americus
Wood, Kenneth, Leslie

### TATTNALL COUNTY

**Officers**

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Vice-President Strickland, L. V.
Sec.-Treas. McCarver, W. C., Jr.
Delegate Pinkston, A. G.
Censors: Pinkston, A. G.; Colson, A. C., and Jelks, L. R.

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Colson, A. C., Glennville
Hughes, J. M., Glennville
Jelks, L. R., Reidsville
McCarver, W. C., Jr., Glennville
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Strickland, L. V., Cobbtown
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### TAYLOR COUNTY

**Officers**

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Vice-President Beason, Lewis
Secretary-Treas. Montgomery, R. C.
Delegate Montgomery, R. C.

**Members**

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Bryan, S. H., Reynolds
Montgomery, R. C., Butler
Sams, F. H., Reynolds

### TELFAIR COUNTY

**Officers**

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Vice-President Maloy, C. J.
Secretary-Treasurer Mann, F. R.
Delegate Parkerson, S. T.
Censors: Born, W. H.; Parkerson, S. T., and Maloy, C. J.

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Born, W. H., McRae
Harrell, A. O., Milan
Maloy, C. J., McRae
Mann, F. R., McRae
Mann, Frank R., Jr., McRae
McRae, D. B., McRae
Parkerson, S. T., McRae

### THOMAS COUNTY

**Officers**

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Vice-President Palmer, Joe I.
Secretary-Treasurer Shepard, Kirk
Delegate Wine, Mervin B.
Alternate Delegate Shepard, Kirk
Censors: Watt, C. H.; Moore, Henry M., and Mobley, John W., Jr.

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Bellhouse, Helen W., P. O. Box 129, Albany
Boozer, I. M., Anniston, Ala.
Cheney, Fred D., VA Hospital, Dublin
Cheshire, Howard L., Thomasville
Collins, J. J., Thomasville
Daniel, Frank C., Pavo
Dillinger, George R., Thomasville
Erickson, Mary J., Thomasville
Futch, T. Allen, Thomasville
Garrett, J. A., Meigs
Harner, J. W., Jr., Thomasville
Isler, J. N., Meigs
Jarrell, W. W., Thomasville (deceased)

King, J T., Thomasville
Levy, Tracy, Veterans Hospital, Tuscaloosa, Ala.
Little, Frank A., Thomasville
Mobley, J. W., Jr., Thomasville
Moore, Henry M., Thomasville
Morton, John B., Thomasville
Palmer, Joe I., Thomasville
Pepin, Henry S., Thomasville
Readling, Herbert F., Thomasville
Reid, James W., Thomasville
Sanchez, S. E., Jr., Barwick
Saye, E B., Thomasville
Shepard, Kirk, Thomasville
Walh, Ernest F., Thomasville
Wall, C. K., Thomasville
Watt, C. H., Thomasville
Wine, Mervin B., Thomasville

### TIFT COUNTY
**Officers**

President ..... Andrews, Ella
Vice-President ..... Webb, M. L.
Sec.-Treas. ..... Winston, Richard K.
Delegate ..... Jones, R. E.
Alt. Delegate Winston, Richard K.

**Members**

Andrews, Agnew, Tifton
Andrews, Ella, Tifton
Evans, E L., Tifton
Fleming, C. A., Tifton
Harrell, D. B., Tifton
Hendricks, W. H., Tifton (deceased)
Jones, R. E., Tifton
Pickett, F. B., Ty Ty
Pittman, Carl S., Tifton
Pittman, Carl S., Jr., Tifton
Shaw, M. F., Omega
Webb, M. L., Tifton
Winston, Richard K., Tifton
Zimmerman, Charles E., Tifton
Zimmerman, W. F., Tifton

### TOOMBS COUNTY
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Secretary-Treasurer ..... Aiken, W. W.
Delegate ..... Mercer, J. E.

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Conner, Herbert L., Vidalia
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**The Medical Association of Georgia will hold its 100th Anniversary Meeting in Savannah May 10-13, 1949.**

**Hotel DeSoto will be headquarters for this session.**

**Have you made your plans to attend this birthday party?**

# The Journal
## *of the*
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## of Georgia

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## COMMUNICATION

To the Editor:

It has come to my attention that considerable misunderstanding has developed throughout the medical profession concerning the establishment of fees for medical services to be paid private physicians partitcipating in the so-called "Home Town Medical Care Program for Veterans." It has been contended that the Veterans Administration has arbitrarily established a Fee Schedule which represents the maximum amount which may be paid for any given service and which is, in effect, a National Fee Schedule. It has also been contended that the various State Medical Socities and other interested groups were not consulted when this Fee Schedule was adopted.

In order to clear up any misunderstanding regarding this matter, it is desired to emphasize that my predecessor, Dr. Paul R. Hawley, had no intention at any time of establishing a National Schedule of Fees, nor do I contemplate doing so. However, the Fee Schedules originally submitted by the various State Medical Societies, when the "Home Town Medical Care Program" was inaugurated, varied so widely in format, terminology, and fees for similar or identical services, that it was deemed advisable to establish a uniform Fee Schedule Format and to set up tentative fees which could be used as a guide by the various State Medical Societies when submitting their proposals for the furnishing of medical care to veterans.

This uniform Fee Schedule Format was formulated by the Professional Group of National Consultants to the Chief Medical Director. This Group, representing the various specialties in medicine and surgery, is composed of eminent physicians from all parts of the country. Tentative fees were set up in the format after a careful analysis of Pre-Paid Medical Care Plan, Workmen's Compensation and Insurance Fee Schedules, and also the Fee Schedules in effect in the various States having agreements with the Veterans Administration. As was to be expected, considerable variation occurred in the Fee Schedules reviewed.

The Professional Group of National Consultants made every effort to arrive at fees that were considered to be within reasonable limits and which would, as nearly as possible, allow a uniform provisional fee schedule for use as a guide in facilitating and expediting the preparation of agreements between State Medical Societies and the Veterans Administration.

Further attempt was made to provide for elasticity in the charges for certain operations or other services which seemed to evoke more than average contention by listing the minimum and maximum amounts considered equitable. These items bear the notation "AA", which indicates that the fee for the given service is to be determined by arbitration and agreement between the Veterans Administration and the Medical Society concerned.

May I reiterate that the Veterans Administration Fee Schedule Format is in no sense to be construed as an arbitrary or National Fee Schedule. Furthermore, it is subject to periodic review and such modification as conditions may indicate.

If it meets with your approval, I would appreciate it very much if you could possibly arrange to publish this as an open letter in the Journal of the American Medical Association. I should like this to reach all of the physicians throughout the country, and I know of no better way to do it than through the Journal.

Very truly yours,

PAUL B. MAGNUSON,
Chief Medical Director
Veterans Administration.

(Washington, D. C., April 27, 1948).

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Maner, Mrs. E. N., 101 E. 45th St., Savannah
Martin, Mrs. R. V., 18 E. 31st St., Savannah
McCarthy, Mrs. Dan (Life), 820 E. 39th St., Savannah
Metts, Mrs. J. C., 303 Anderson Ave., Savannah
Morrison, Mrs. A. A., Sr., (Hon.), 1702 Bull St., Savannah
Morrison, Mrs. Howard, 102 E. Gaston St., Savannah
Neville, Mrs. Lester, 32 E. 49th St., Savannah
Oliver, Mrs. Robert L., 1133 Washington Ave., Savannah
Olmstead, Mrs. G. T., 33 E. 45th St., Savannah
Osborne, Mrs. Elton, 7 Edgewood Ave., Savannah
Osteen, Mrs. W. Loyd, 610 Anderson Ave., Savannah
Pacifici, Mrs. Joseph, 730 E. 48th St., Savannah
Peterson, Mrs. T. A., 1117 Washington Ave., Savannah
Pinholster, Mrs. J. H., 421 E. 44th St., Savannah
Porter, Mrs. John E., 501 E. 53rd St., Savannah
Portman, Mrs. H. J., 1135 Lexington Ave., Savannah
Powers, Mrs. Leander K., 623 E. 54th St., Savannah
Quattlebaum, Mrs. Julian K., 203 E. 45th St., Savannah
Rabhan, Mrs. Leonard, 201 E. 52nd St., Savannah
Redmond, Mrs. C. G., 701 Whitaker St., Savannah
Redmond, Mrs. C. R. A., 201 E. Hall St., Savannah
Righton, Mrs. H. Y., 401 E. 45th St., Savannah
Rosen, Mrs. Sam F., 1512 E. Henry St., Savannah
Rubin, Mrs. Jacob, 727 E. 44th St., Savannah
Sax, Mrs. Charles, 318 E. Gaston St., Savannah
Schneider, Mrs. Meyer M., 401 E. 50th St., Savannah
Sharpley, Mrs. John, 1127 Washington Ave., Savannah
Shaw, Mrs. L. W., Isle of Hope, Savannah
Smith, Mrs. Harold M., 23 Wessels Ave., Savannah
Stalvey, Mrs. J. K., 1809 E. 39th St., Savannah
Touchton, Mrs. G. L., Forsythe Apts., Savannah
Train, Mrs. J. K., 1111 Bull St., Savannah
Train, Mrs. J. Kirk, Jr., 526 E. 53rd St., Savannah
Upson, Mrs. Thomas, 114 E. 52nd St., Savannah
Usher, Mrs. Charles, 6 E. Liberty St., Savannah
Victor, Mrs. Jules, Jr., 502 Maupas Ave., Savannah
Waring, Mrs. A. J., 2912 Atlantic Ave., Savannah
Watkins, Mrs. Lee C., (Asso.), Wilmington Island, Savannah
Westerfield, Mrs. Charles W., 2044 Forest Ave., Savannah
Williams, Mrs. Alton F., 622 E. 52nd St., Savannah
Williams, Mrs. L. W., 135 E. 45th St., Savannah
Wilson, Mrs. W. D., 911 Whitaker St., Savannah

## SECOND DISTRICT

Manager, Mrs. Cecil N. Brannen, 1224 First St., S. E., Moultrie

### Colquitt County

President, Mrs. John F. McCoy, 103 9th Ave., S. E., Moultrie

**Members**

Brannen, Mrs. C. C., 615 1st Ave., S. E., Moultrie
Brannen, Mrs. Cecil, 1224 1st St., S. E., Moultrie
Conger, Mrs. P. D., 1207 S. Main St., Moultrie
Fokes, Mrs. R. E., Jr., 221 2nd St., S. E., Moultrie
Funderburke, Mrs. A. G., 803 1st St., S. E., Moultrie
Gay, Mrs. Frank M., 216 Hillcrest, Moultrie
Joiner, Mrs. R. M., 918 3rd St., S. W., Moultrie
McCoy, Mrs. John, 103 9th St., S. E., Moultrie
Paulk, Mrs. James, 1103 1st St., S. E., Moultrie
Stegall, Mrs. Robert, 403 S. Main St., Moultrie
Withers, Mrs. Sam, 9th Ave., S. E., Moultrie
Woodall, Mrs. J. B., 606 1st St., S. E., Moultrie

### Dougherty County

President, Mrs. Frank Thomas, 808 3rd Ave., Albany

**Members**

Armstrong, Mrs. Edward S., 1311 4th Ave., Albany
Barnett, Mrs. J. M., 527 Pine Ave., Albany
Bowman, Mrs. M. Berry, 1112 N. Madison, Albany
Buckner, Mrs. Frank W., 615 3rd Ave., Albany
Cole, Mrs. Thomas M., Medical Bldg., Albany
Cook, Mrs. W. S., 312 Flint Ave., Albany
Dixon, Mrs. Leonard J., 1135 Julia St., Albany
Feild, Mrs. W. M., Madison Terrace Apts., Albany
Hillsman, Mrs. P. L., 1612 Maryland Dr., Albany
Helman, Mrs. C. M., 1005 McKinley St., Albany
Irvin, Mrs. I. W., 1207 N. Madison, Albany
James, Mrs. A. E., 1010 First Ave., Albany
Keaton, Mrs. John C., 526 Pine Ave., Albany
Lucas, Mrs. I. M., 910 N. Madison, Albany
McDaniel, Mrs. J. Zeb, 709 N. Jefferson, Albany
McKemie, Mrs. H. M., 1201 N. Davis, Albany
McKemie, Mrs. W. Frank, 1011 N. Monroe, Albany
Mann, Mrs. David, 238¼ Pine Ave., Albany
Neill, Mrs. Frank K., 1112 N. Davis, Albany
Redfearn, Mrs. James A., 527 Broad Ave., Albany
Rhyne, Mrs. W. P., 631 Fifth Ave., Albany
Roberson, Mrs. Phil E., 1203 N. Madison, Albany
Russell, Mrs. Paul T., 513 N. Cleveland, Albany
Seymour, Mrs. Glenn E., 702 N. Slappey Dr., Albany
Thomas, Mrs. Frank E., 808 3rd St., Albany
Tye, Mrs. James P., 413 Fourth Ave., Albany

### Tift County

President, Mrs. Richard K. Winston, 807 Wilson Ave., Tifton

**Members**

Andrews, Mrs. Agnew, Tifton
Andrews, Mrs. John S., Tifton
Evans, Mrs. E. L., Tifton
Fleming, Mrs. C. A., Tifton
Harrell, Mrs. D. B., Tifton
Jones, Mrs. R. E., Tifton
Peterson, Mrs. N., Tifton
Pickett, Mrs. F. B., Ty Ty
Pittman, Mrs. C. S., Jr., Tifton
Pittman, Mrs. C. S., Sr., Tifton
Smith, Mrs. W. T., Tifton
Webb, Mrs. M. L., Tifton
Winston, Mrs. R. K., Tifton
Zimmerman, Mrs. C., Tifton
Zimmerman, Mrs. W. F., Tifton

## THIRD DISTRICT

Manager, Mrs. T. Schley Gatewood, 1020 Hancock Dr., Americus

### Dodge-Pulaski-Bleckley Counties (Ocmulgee Medical Society)

President, Mrs. James W. Thompson, Eastman

**Members**

Batts, Mrs. A. S., Hawkinsville
Bush, Mrs. A. R., Hawkinsville
Coleman, Mrs. Warren A., Eastman
Holder, Mrs. Frank, Eastman
Jones, Mrs. E. G., Eastman
Long, Mrs. H. W., Eastman
Mayo, Mrs. J. P., Eastman
Smith, Mrs. A. L., Cochran
Smith, Mrs. R. L., Cochran
Thompson, Mrs. James W., Eastman
Whipple, Mrs. R. L., Cochran

### Houston-Peach Counties

President, Mrs. J. L. Gallemore, Perry

**Members**

Gallemore, Mrs. J. L., Perry
Hendrick, Mrs. Alford G., Perry

**Muscogee County**

President, Mrs. Luther H. Wolff, 1818 Slade Dr., Columbus

**Members**

Berry, Mrs. Arthur N., Peacock Woods, Columbus
Bickerstaff, Mrs. Hugh J., Country Club Apts., Columbus
Blanchard, Mrs. Mercer, 1543 Eberhart Ave., Columbus
Brannen, Mrs. Ollie C., 1318 Starke Ave., Columbus
Blackmar, Mrs. Francis B., 1243 Forrest Ave., Columbus
Blumstein, Mrs. C. L., Country Club Apts., Columbus
Boyter, Mrs. Henry H., 2222 15th St., Columbus
Butler, Mrs. Clarence C., 1154 Britt Ave., Columbus
Bush, Mrs. John, 1600 16th Ave., Columbus
Berman, Mrs. Dave, 1354 Virginia St., Columbus
Conner, Mrs. George R., 1816 Wildwood Ave., Columbus
Chipman, Mrs. R. A., 1027 Lawyers Lane, Columbus
Cook, Mrs. Wm. G., 926 Peachtree Dr., Columbus
Cooke, Mrs. Wm. L., 2110 Oak Ave., Columbus
Cosby, Mrs. F. L., 1820 Starke Ave., Columbus
Dillard, Mrs. Guy J., 1919 Flournoy Dr., Columbus
Dykes, Mrs. A. N., Peacock Woods, Columbus
Freeman, Mrs. Edward R., 1410 15th St., Columbus
Edleson, Mrs. Louis R., 1523 Hilton Ave., Columbus
Edwards, Mrs. Franklin D., Country Club Apts., Columbus
Gibson, Mrs. Roy L., Lockwood Dr., Columbus
Gilliam, Mrs. G. D., 1715 Carter Pl., Columbus
Jenkins, Mrs. Will Fred, Dixon Dr., Columbus
Jones, Mrs. W. R., 2408 14th Ave., Columbus
Jordan, Mrs. Willis P., Jr., 3509 Camille Dr., Columbus
Knowles, Mrs. Clyde, Helen Dr., Columbus
Land, Mrs. Polk S., 604 Brown Ave., Columbus
Lapides, Mrs. Leon, Country Club Apts., Columbus
Mayher, Mrs. John L., Plumfield, Columbus
Mayher, Mrs. Wm. E., 1112 Dinglewood, Columbus
McDuffie, Mrs. James Henry, 1304 E. 10th St., Columbus
Murray, Mrs. Geo. Stewart, Dinglewood, Columbus
Peacock, Mrs. Clifford A., 1266 Cedar Ave., Coulmbus
Schley, Mrs. Francis B., 1352 Peacock Ave., Columbus
Schuessler, Mrs. Geo. D., 1518 Dixon Dr., Columbus
Snelling, Mrs. Wm. R., 111 Tickner Dr., Columbus
Smith, Mrs. Chas. R., 2131 Hillside Dr., Columbus
Stapleton, Mrs. J. L., 1130 5th Ave., Columbus
Storey, Mrs. W. Edward, 3387 Macon Rd., Columbus
Thrash, Mrs. J. A, Chatulga Rd., Columbus
Threatte, Mrs. Bruce, 1900 Dimon Circle, Columbus
Tillery, Mrs. Bert, 1544 Cherokee Dr., Columbus
Tatum, Mrs. P. A., 3013 Cherokee Dr., Columbus
Thompson, Mrs. John B., 1603 Wynnton Rd., Columbus
Venable, Mrs. Douglas R., 1722 Starke Ave., Columbus
Walker, Mrs. John E., Green Island Hills, Columbus
Willis, Mrs. J. Neal, 1240 Cedar Ave., Columbus
Wilson, Mrs. J. M., 3431 Edgewood Rd., Columbus
Winn, Mrs. John H., 935 Blandford Ave., Columbus
Wolff, Mrs Luther H., 1818 Slade Dr., Columbus
Youmans, Mrs. J. R., 1600 Boulevard, Columbus

**Randolph-Terrell Counties**

President, Mrs. A. R. Sims, Richland

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Crook, Mrs. W. W., Cuthbert
Daniel, Mrs. Ernest F., Dawson
Elliott, Mrs. W. G., Cuthbert
Harper, Mrs. T. F., Coleman
Kenyon, Mrs. S. P., Dawson
Martin, Mrs. F. M., Shellman
Martin, Mrs. R. B., Cuthbert
Martin, Mrs. W. D., Shellman
Paschal, Mrs. J. D., Dawson
Patterson, Mrs. J. C., Cuthbert
Quattlebaum, Mrs. R. B., Ft. Gaines
Rogers, Mrs. F. S., Coleman
Sims, Mrs. A. R., Richland
Tidmore, Mrs. J. C., Dawson

**Sumter County**

President, Mrs. John H. Robinson, 1022 Hancock Dr., Americus

**Members**

Durham, Mrs. Bon M., 218 Taylor, Americus
Gatewood, Mrs. Schley, 1020 Hancock Dr., Americus
Pendergrass, Mrs. R. C., 144 Taylor, Americus
Primrose, Mrs. A. C., 801 Hancock Dr., Americus
Smith, Mrs. Herschel A., 601 Lee, Americus
Robinson, Mrs. John H., 1022 Hancock Dr., Americus
Thomas, Mrs. Russell, Leslie Rd., Americus

## FOURTH DISTRICT

**Carroll-Douglas-Haralson Counties**

President, Mrs. Robert L. Berry, Jr., Villa Rica

**Members**

Barker, Mrs. Homer Lumpkin, 15 Spring St., Carrollton
Berry, Mrs. Robert L, Citron St., Villa Rica
Denney, Mrs. Roy Lumpkin, 14 College St., Carrollton
Downey, Mrs. William Perrin, 11 E. Mill St., Tallapoosa
Fitts, Mrs. Charles C., 73 Rome St., Carrollton
Gilmore, Mrs. Eugene L., Boulevard Ave., Tallapoosa
Holtz, Mrs. Louis, 29 Reese St., Carrollton
Moore, Mrs. R. B., Villa Rica
Morgan, Mrs. Floyd W., 75 Church St., Douglasville
Parham, Mrs. John B., Alewine Ave., Tallapoosa
Powell, Mrs. John E., Sr., Villa Rica
Reese, Mrs. Davis Stephens, 49 Dixie St., Carrollton
Roberts, Mrs. L. J., Carrollton
Scales, Mrs. Seaborn F., P. O. Box 304, Carrollton
Smith, Mrs. William Posie, College St., Bowdon
Thomasson, Mrs. Wm. Edward, 16 Maple St., Carrollton
Vansant, Mrs. Claud Victory, 133 Broad St., Douglasville
Watts, Mrs. James Wyley, College St., Bowdon
Worthy, Mrs. W. Steve, 39 West Ave., Carrollton

## FIFTH DISTRICT

Manager, Mrs. Edgar M. Dunstan, 604 Ponce de Leon Pl., Decatur

**DeKalb County**

President, Mrs. W. P. Smith, 192 Lamont Dr., Decatur

**Members**

Ansley, Mrs. Robert B., 212 S. Candler St., Decatur
Beck, Mrs. John E., 144 Pinecrest Ave., Decatur
Cunningham, Mrs. C. Edward, 350 S. Candler St., Decatur
Duncan, Mrs. Glenn A., 714 S. Candler St., Decatur
Evans, Mrs. J. Rufus, E. Mountain Ave., Stone Mountain
Kerr, Mrs. W. K., Chamblee
Leslie, Mrs. John T., 48 Dartmouth Ave., Avondale Estates
Litton, Mrs. J. H., Tucker
Matthews, Mrs. Lawrence P., 2388 Westminster Way, N. E., Atlanta
McGeachy, Mrs. T. English, 429 Adams St., Decatur
Mendenhall, Mrs. W. A., Chamblee
Powell, Mrs. F. C., 124 Mimosa Pl., Decatur
Smith, Mrs. W. Patt, 192 Lamont Dr., Decautr
Stewart, Mrs. Thomas W., Lithonia
Williams, Mrs. David C., Sr., W. Benson St., Decatur

**Fulton County**

President, Mrs. Shelley C. Davis, 1259 Peachtree Battle Ave., Atlanta

**Members**

Abbott, Mrs. Osler A, 516 E. Wesley Rd., N. E., Atlanta
Adams, Mrs. H. M. S., 1257 Euclid Ave., N. E., Atlanta
Agnor, Mrs. E. B, 2358 Westminster Way, N. E., Atlanta

Akin, Mrs. John T., Jr., 2072 Cottage Lane, Atlanta
Allen, Mrs. Eustace A., 18 Collier Rd., N. W., Atlanta
Anderson, Mrs. Robert T., 1823 Boulevard Dr., S. E., Atlanta
Anderson, Mrs. W. W., 63 Avery Dr., N. E., Atlanta
Arnold, Mrs. W. A., 55 Briarcliff Circle, N. E., Atlanta
Arp, Mrs. C. Raymond, 80 Westminster Dr., N. E., Atlanta
Arthur, Mrs. J. Frank, 828 Adair Ave., N. E., Atlanta
Ashford, Mrs. John W., 229 The Prado, N. E., Atlanta
Ashren, Mrs. Edward L., Jr., 685 Timm Valley Rd., N. E., Atlanta
Askew, Mrs. Hulett H., 1329 Springdale Rd., N. E., Atlanta
Atwater, Mrs. John S., 1729 Lenox Rd., N. E., Atlanta
Aven, Mrs. C. C., 3825 Roswell Rd., N. W., Atlanta
Baggett, Mrs. L. G., 410 Argonne Dr., N. W., Atlanta
Baker, Mrs. L. P., 52 17th St., N. E., Atlanta
Bancker, Mrs. Evert A., 3810 Club Dr., N. E., Atlanta
Barfield, Mrs. Forrest M., 77 Peachtree Memorial Dr., N. W., Atlanta
Barnett, Mrs. Crawford F., 2628 Rivers Rd., N. W., Atlanta
Barnett, Mrs. Stephen T., 144 Huntington Rd., N. W., Atlanta
Bateman, Mrs. Gregory W., 499 McAllister St., S. W., Atlanta
Bateman, Mrs. Needham B., 88 Woodsy Way, Atlanta
Beard, Mrs. Donald E., 1410 Peachtree St., Atlanta
Beasley, Mrs. B. T., Colonial Homes Apts., Atlanta
Benson, Mrs. H. Bagley, 3065 E. Pine Valley Rd., N. W., Atlanta
Benson, Mrs. Marion T., Sr., 1040 Springdale Rd., N. E., Atlanta
Benson, Mrs. Marion T., Jr., 3301 Habersham Rd., N. W., Atlanta
Berry, Mrs. Maxwell R., 196 Peachtree Way, N. E., Atlanta
Bivings, Mrs. Lee, 3110 Habersham Rd., N. W., Atlanta
Blackman, Mrs. W. W., 248 Andrews Dr., N. E., Atlanta
Blaine, Mrs. Belford C., 118 Terrace Dr., N. E., Atlanta
Blalock, Mrs. Tully T., 4241 Club Dr., N. E., Atlanta
Blandford, Mrs. W. C., 3551 Ivy Rd., Atlanta
Blumberg, Mrs. Max M., 251 Tenth St., N. W., Atlanta
Boland, Mrs. Charles G., 125 Rumson Rd., N. E., Atlanta
Boland, Mrs. Frank K., 252 Peachtree Circle, N. E., Atlanta
Boland, Mrs. F. Kells, Jr., 128 Peachtree Memorial Dr., N. W., Atlanta
Boland, Mrs. Joseph H., 120 Sheridan Dr., N. E., Atlanta
Boling, Mrs. Edgar, 1236 Springdale Rd., N. E., Atlanta
Boyd, Mrs. B. Hartwell, 263 The Prado, N. E., Atlanta
Brawner, Mrs. James N., 2800 Peachtree Rd., N. E., Atlanta
Brawner, Mrs. James N., Jr., 262 Wesley Rd., N. W., Atlanta
Brown, Mrs. C. MacKenzie, 669 Kennolia Dr., S. W., Atlanta
Brown, Mrs. S. Ross, 1000 Peachtree Battle Ave., Atlanta
Brown, Mrs. Robert L., 189 Avery Dr., N. E., Atlanta
Brown, Mrs. Stephen T., 1088 Oxford Rd., N. E., Atlanta
Bunce, Mrs. Allen H., 368 Ponce de Leon Ave., N. E., Atlanta
Burke, Mrs. B. Russell, 1996 Ponce de Leon Ave., N. E., Atlanta
Burgess, Mrs. Taylor S., 40 Woodcrest Ave., N. W., Atlanta
Bush, Mrs. O. B., 57 Rumson Way, Atlanta
Byram, Mrs. James H., 2080 Ridgewood Rd., N. W., Atlanta
Byrd, Mrs. T. Luther, 126 Blackland Rd., N. W., Atlanta
Calhoun, Mrs. F. Phinizy, 2906 Andrews Dr., N. W., Atlanta
Camp, Mrs. R. T., Fairburn
Campbell, Mrs. John D., 668 Darlington Rd., N. E., Atlanta
Candler, Mrs. Robert W., 2498 Montview Dr., N. W., Atlanta
Carter, Mrs. Sandy B., 3565 Roxboro Rd., N. E., Atlanta
Cathcart, Mrs. Don F., 456 Peachtree Battle, N. W., Atlanta
Champion, Mrs. W. L., 1323 Ponce de Leon Ave., N. E., Atlanta
Childs, Mrs. J. R., 1965 Ponce de Leon Ave., N. E., Atlanta
Claiborne, Mrs. T. S., 455 West Wesley Rd., N. E., Atlanta
Clark, Mrs. James J., 1081 Springdale Rd., N. E., Atlanta
Clifton, Mrs. Ben Hill, 1893 Wycliff Rd., N. W., Atlanta
Cofer, Mrs. Olin S., 948 Lullwater Rd., N. E., Atlanta
Cohen, Mrs. Isadore R., 2295 Decatur Rd., N. E., Atlanta
Coleman, Mrs. Reese C., Jr., 1350 Northview Ave., N. E., Atlanta
Collingsworth, Mrs. Allen M., 60 Montgomery Ferry Dr., Atlanta
Collingsworth, Mrs. P. L., 393 7th St., N. E., Atlanta
Collier, Mrs. Thos. J., 1781 Peachtree St., N. W., Atlanta
Combs, Mrs. Jas. M., 2610 Winslow Dr., N. E., Atlanta
Cooke, Mrs. Virgil C., Bakers Ferry Rd., Atlanta
Coppedge, Mrs. W. W., 313 Kimmeridge Dr., East Point
Cousins, Mrs William L., Rt. 3, Decatur
Crawford, Mrs. Herschel C., 3000 E. Pine Valley Rd., N. W., Atlanta
Cross, Mrs. John B., 2606 Dellwood Dr., N. W., Atlanta
Curtis, Mrs. Walker L., 302 W. Rugby Ave., College Park
Daly, Mrs. Leo P., 480 E. Wesley Rd., N. W., Atlanta
Daniel, Mrs. C. H., 801 W. Rugby Ave., College Park
Daniel, Mrs. Eugene L., 230 Howard St., N. E., Atlanta
Daniel, Mrs. Walter W., 1705 Pelham Rd., N. E., Atlanta
Davenport, Mrs. T. F., 1038 Peachtree Battle Ave., Atlanta
Davis, Mrs. Shelley C., 1259 Peachtree Battle Ave., Atlanta
Davis, Mrs. W. Ben, 720 W. Walker, College Park
Davison, Mrs. Hal M., 2888 Habersham Rd., N. W., Atlanta
Davison, Mrs. T. C., 25 Valley Rd., N. E., Atlanta
Denton, Mrs. John F., 1503 Peachtree St., N. E., Atlanta
Dew, Mrs. J. Harris, 214 Peachtree Battle Ave., N. E., Atlanta
Dickson, Mrs. Roger W., 1952 Walthall Dr., N. W., Atlanta
Dobes, Mrs. Wm. L., 912 Lullwater Rd, N. E., Atlanta
Dorough, Mrs. W. S., 2450 Peachtree Rd., Atlanta
Dowman, Mrs. Chas. E., Sr., 630 Linwood Ave., N. E., Atlanta
Duncan, Mrs. John B., 18 Palisades Rd., N. E., Atlanta
Dunn, Mrs. Wm. M., 2801 Andrews Dr., N. W., Atlanta
Dunston, Mrs. E. M., 604 Ponce de Leon Pl., Decatur
DuVall, Mrs. W. Beecher, 905 Cascade Ave., S. W., Atlanta
Earle, Mrs. Walter C., 1930 Greystone Rd., N. W., Atlanta
Eberhart, Mrs. Charles, 1206 Cumberland Rd., N. E., Atlanta
Edgerton, Mrs. M. T., 788 Penn Ave., N. E., Atlanta
Edwards, Mrs. Wm. T., 1034 W. College Ave., Decatur
Equen, Mrs. Murdock, 2505 Habersham Rd., N. W., Atlanta
Evans, Mrs. Albert L., 2393 Hurst Dr., N. E., Atlanta
Fancher, Mrs. J. K., 3094 Pine Valley Rd., N. W., Atlanta
Felber, Mrs. Ernest, 147 W. Wesley Rd., N. W., Atlanta
Filip, Mrs. A. J., 2300 Haven Ridge Dr., N. W., Atlanta
Fincher, Mrs. Edgar F., 109 Peachtree Circle, N. E., Atlanta
Fischer, Mrs. Luther C., Sharpsburg
Foster, Mrs. Kimsey E., College Park
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Frierson, Mrs. Norton, 787 Penn Ave., N. E., Atlanta
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Funkhouser, Mrs. Wm. L., 2419 Woodward Way, N. W., Atlanta
Funke, Mrs. John, 712 Durant Place, N. E., Atlanta
Gay, Mrs. T. Bolling, 3042 W. Pine Valley Rd., Atlanta
Gershon, Mrs. Nathan I., 305 Tenth St., N. E., Atlanta
Giddings, Mrs. Glenville, 1585 Ponce de Leon Ave., Atlanta
Gilliam, Mrs. Robert L., 3936 Club Dr., Atlanta
Glenn, Mrs. Wadley R., Dunwoody

Glisson, Mrs. C. S., Jr., 1012 Cumberland Rd., N. E., Atlanta
Goodwyn, Mrs. Thos. P., 2480 Woodward Way, N. E., Atlanta
Green, Mrs. Samuel, 697 E. Morningside Dr., Atlanta
Greene, Mrs. Edgar H., 1442 W. Wesley Rd, N. W., Atlanta
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Grove, Mrs. Lon W., 2533 Habersham Rd., N. W., Atlanta
Hailey, Mrs. Hugh, 120 Peachtree Memorial Dr., N. W., Atlanta
Hall, Mrs. Charles E., Jr., 903 Piedmont Ave., N. E., Atlanta
Hamff, Mrs. L. Harvey, 906 Briarcliff Rd., N. E., Atlanta
Hamm, Mrs. Wm. G., 2877 Habersham Rd., N. W., Atlanta
Hancock, Mrs. Robert K., 156 Conway Rd., Decatur
Hanner, Mrs James P., Collier Rd., N. W., Atlanta
Harris, Mrs. J. Frank, 491 Seminole Ave., N. E., Atlanta
Harrison, Mrs. M. T., 1096 E. Clifton Rd., N. E., Atlanta
Hauck, Mrs. A. E., 99 Princeton Way, Atlanta
Henry, Mrs. Lamont, 201 Brighton Rd., N. E., Atlanta
Hess, Mrs. Geo., 505 McDonough Boulevard, S. E., Atlanta
Hewell, Mrs. Guy C., 1123 Berkshire Rd., N. E., Atlanta
Heyser, Mrs. D. T., 5910 Glenridge Dr., Atlanta
Hodges, Mrs. Fred B., Jr., 2255 Virginia Pl., N. E., Atlanta
Hodgson, Mrs. Fred G., 851 Clifton Rd., N. E., Atlanta
Holloway, Mrs. Geo. A., 489 Westover Dr., N. W., Atlanta
Holmes, Mrs. Walter R., 85 Peachtree Circle, N. E., Atlanta
Hope, Mrs. Hollis F., 665 Greenview Ave., N. E., Atlanta
Horton, Mrs. B E., 1150 North Ave., N. E., Atlanta
Howard, Mrs. Chas. K., 761 Kennolia Dr., S. W., Atlanta
Howell, Mrs. Stacy C., 434 Brentwood Dr., N. E., Atlanta
Hrdlicka, Mrs. George R., 658 Kennesaw Ave., N. E., Atlanta
Huie, Mrs. Robert E., 19 Exeter Rd., Atlanta
Hydrick, Mrs. Peter, 134 W. Walker Ave., College Park
Jacobs, Mrs. John L., 2883 Andrews Dr., N. W., Atlanta
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Josephs, Mrs. Alvin D., 939 Courtney Dr., N. E., Atlanta
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Kanthak, Mrs. Frank F., 2420 Peachtree Rd., Atlanta
Kemper, Mrs. Clifton G., 956 Stovall Boulevard, N. E., Atlanta
King, Mrs. Jas. T., 1062 Oxford Rd, N. E., Atlanta
Kirkland, Mrs. Spencer A., 106 Peachtree Battle Ave., Atlanta
Kiser, Mrs. Wm. H., Jr., 210 Peachtree Circle, N. E., Atlanta
Kite, Mrs. J. Hiram, 639 E. Ponce de Leon Ave., Decatur
Klugh, Mrs. George F., 395 Tenth St, N. E., Atlanta
Lake, Mrs. Wm. F., 241 Rumson Rd., N. E., Atlanta
Landham, Mrs. Jackson W., 4199 Club Dr., N. W., Atlanta
Lamm, Mrs. J. H., Colonial Homes Apts., Atlanta
Lange, Mrs. Harry, 2870 Arden Rd., N. W., Atlanta
Laws, Mrs. Clarence L., 3209 Habersham Rd., N. W., Atlanta
Leadingham, Mrs. Roy S., 3 Park Lane, N. E., Atlanta
Letton, Mrs. A. H., 1 Pine Circle, N. E., Atlanta
Linch, Mrs. A. O., 943 Rosedale Rd., N. E., Atlanta
Lineback, Mrs. Merrill L., 2136 McKinley Rd., N. W., Atlanta
Logue, Mrs. R. Bruce, 145 Westminster Dr., Atlanta
Lokey, Mrs. Hugh M., 256 Fourteenth St., N. E., Atlanta
Longino, Mrs. Dick R., 1344 Lanier Boulevard, N. E., Atlanta
Lowance, Mrs. Mason, 877 W. Wesley Rd., N. W., Atlanta
Lower, Mrs. Emory G., 619 Myrtle St, N. E., Atlanta
Lunsford, Mrs Guy C., 4010 Osborne Rd., Chamblee
McCain, Mrs. John R., 3195 Paces Ferry Pl., N. W., Atlanta
McClure, Mrs. Robert E., 238-A Peachtree Circle, Atlanta
McDaniel, Mrs. J. G., 820 W. Wesley Rd., Atlanta
McDonald, Mrs. Harold P., 2400 W. Wesley Rd., N. W., Atlanta
McDonald, Mrs. Lewis H., 625 Darlington Rd., N. E., Atlanta
McDougall, Mrs. Wm. L., 275 Blackland Rd., N. W., Atlanta
McElroy, Mrs. Joseph D., 1551 Mayflower Ave., S. W., Atlanta
McGee, Mrs. R. W., Ben Hill
McLoughlin, Mrs. C. J., 2465 Rivers Rd., N. W., Atlanta
McRae, Mrs. Floyd W., 3053 Habersham Rd., N. W., Atlanta
Main, Mrs. Emory H., 710 W. Walker Ave., College Park
Malone, Mrs. O. T., 379 Collier Rd., N. W., Atlanta
Manget, Mrs. J. D., Jr., 816 Wildwood Rd., N. E., Atlanta
Martin, Mrs. Jas. J., 131 Forrest Ave., N. E., Atlanta
Martin, Mrs. Wm. O., 175 Blackland Rd., N. W., Atlanta
Massee, Mrs. Joseph C., 1146 Lullwater Rd., N. E., Atlanta
Matthews, Mrs. O. H., 61 Barksdale Dr., N. E., Atlanta
Matthews, Mrs. Warren B., 216 N. Candler St., Decatur
Maulding, Mrs. Homer R., 936 Coventry Rd., Atlanta
Mauldin, Mrs. John T., 31 Karland Dr., N. W., Atlanta
Merrill, Mrs. Arthur J., 3555 Nancy Creek Rd., Atlanta
Miller, Mrs. Linus, Jr., 21 LaFayette Way, N. W., Atlanta
Minnich, Mrs. Frederic R., 3085 E. Pine Valley Rd., Atlanta
Minnich, Mrs. W. R., 21 Vernon Rd., N. W., Atlanta
Minor, Mrs. H. W., 4665 Peachtree Dunwoody Rd., Atlanta
Mitchell, Mrs. Wm. E., 438 W. Wesley Rd., N. W., Atlanta
Monfort, Mrs. J. M., 3870 Club Dr., Atlanta
Morris, Mrs. S. L., Jr., 58 Brighton Rd., Atlanta
Mosley, Mrs. Hugh G., 3514 Nancy Creek Rd., N. W., Atlanta
Mullen, Mrs. Malcolm P., 460 E. Wesley Rd., N. E., Atlanta
Nabors, Mrs. Dewey T., 2380 Dellwood Dr., Atlanta
Nall, Mrs. J. D., 1029 Rosedale Rd., N. E., Atlanta
Neel, Mrs. Malcolm M., 206 Loraine Dr., Brookhaven
Newberry, Mrs. Richard E., 2160 Ponce de Leon Ave., N. E., Atlanta
Nicolson, Mrs. W. P., Jr., 821 Piedmont Ave., N. E., Atlanta
Nippert, Mrs. P. H., 1015 Peachtree Battle Circle, Atlanta
Norris, Mrs. Jack C., 511 Peachtree Battle Ave., Atlanta
Olds, Mrs. Bomar A., 267 The Prado, N. E., Atlanta
O'Neal, Mrs. Buford L., 173 Putnam Circle, N. W., Atlanta
Parks, Mrs. Harry, 2479 Dellwood Dr., N. W., Atlanta
Patterson, Mrs. J. H., 115 Peachtree Memorial Dr., Atlanta
Paullin, Mrs. J. E., 2834 Andrews Dr., N. W., Atlanta
Pendergrast, Mrs. Wm. J., 500 Briarcliff Rd, Atlanta
Pentecost, Mrs. M. P., 5081 W. Pine Valley Rd., N. W., Atlanta
Perry, Mrs. Samuel W., 1327 Peachtree St., N. E., Atlanta
Phillips, Mrs. Hayward S., 1738 Homestead Ave., N. E., Atlanta
Pierotti, Mrs. Julius V., 2 Collier Rd., N. W., Atlanta
Pittman, Mrs. Jas. L., 2966 Howell Mill Rd., Atlanta
Poer, Mrs. D. Henry, 124 Peachtree Memorial Dr., N. W., Atlanta
Powell, Mrs. Vernon E., 2421 Sagamore Dr., N. W., Atlanta
Pruitt, Mrs. Marion C., Henry Grady Hotel, Atlanta
Quillian, Mrs. W. E., 986 Ponce de Leon Ave., Atlanta
Read, Mrs. Ben S., 993 Stovall Boulevard, N. E., Atlanta
Read, Mrs. Clinton, Route 5, Marietta
Read, Mrs. Jos. C., 3970 Vermont Rd., N. E., Atlanta
Redd, Mrs. Stephen C., 3515 Ridgewood Rd., Atlanta

Rhodes, Mrs. C. A., 120 Brighton Rd., N. E., Atlanta
Richardson, Mrs. J. L., 969 Clifton Rd., N. E., Atlanta
Rieser, Mrs. Charles, 3777 Paces Ferry Rd., N. W., Atlanta
Roberts, Mrs. C. W., 75 Ponce de Leon Ave., N. E., Atlanta
Roberts, Mrs. Hines, 393 W. Wesley Rd., N. W., Atlanta
Roberts, Mrs. Stewart R., 16 Woodcrest Ave., N. W., Atlanta
Robinson, Mrs. R. L., 99 Peachtree Memorial Dr., N. W., Atlanta
Rogers, Mrs. J. Harry, 1325 Peachtree St., Atlanta
Rosenberg, Mrs. Herbert J., 346 Briarcliff Rd., N. E., Atlanta
Ronglin, Mrs. L. C., 1021 St. Charles Ave., N. E., Atlanta
Rudder, Mrs. Fred, 797 St. Charles Ave., N. E., Atlanta
Rushin, Mrs. Charles E., 50 Camden Rd., N. E., Atlanta
Russell, Mrs. David A., Jr., 25 Sheridan Dr., Atlanta
Sage, Mrs. Dan Y., 47 Inman Circle, N. E., Atlanta
Sanders, Mrs. A. S., 1660 E. Emory Rd., N. E., Atlanta
Sauls, Mrs. H. C., 2887 Howell Mill Rd., N. W., Atlanta
Scarborough, Mrs. J. E., 100 Westminster Dr., N. E., Atlanta
Schroder, Mrs. Spalding, 2795 Atwood Rd., N. E., Atlanta
Selman, Mrs. W. A., 760 Penn Ave., N. E., Atlanta
Shackleford, Mrs. B. L., 120 Blackland Rd., N. W., Atlanta
Shepard, Mrs. V. Duncan, 105 Peachtree Memorial Dr., Atlanta
Sheldon, Mrs. Walter H., 1117 Zimmer D., N. E., Atlanta
Sinkoe, Mrs. Samuel J., 1410 Peachtree St., N. E., Atlanta
Skobba, Mrs. Jos. S., 25 Sheridan Dr., N. E., Atlanta
Sloan, Mrs. W. P., 1282 Oakdale Rd., N. E., Atlanta
Smith, Mrs. Carter, 450 W. Wesley Rd., N. W., Atlanta
Smith, Mrs. Linton, Pershing Hotel, Atlanta
Smith, Mrs. Wm. A., 2956 Lenox Rd., N. E., Atlanta
Smith, Mrs. Randolph, 37 LaFayette Dr., N. E., Atlanta
Stampa, Mrs. Sam, 1026 St. Charles Ave., N. E., Atlanta
Staton, Mrs. T. R., 141 Seventeenth St., N. E., Atlanta
Steadman, Mrs. Henry E., 3743 Atlanta Ave., Hapeville
Stewart, Mrs. Calvin B., 21 W. Andrews Dr., N. W., Atlanta
Stone, Mrs. Chas. F., Jr., 4175 Club Dr., N. E., Atlanta
Strickler, Mrs. C. W., Sr., 371 Oakdale Rd., N. E., Atlanta
Strickler, Mrs. C. W., Jr., 355 Peachtree Battle Ave., N. W., Atlanta
Swanson, Mrs. Cosby, 10 Cherokee Rd., Atlanta
Swanson, Mrs. Homer S., 3834 Vermont Rd., N. E., Atlanta
Tarplee, Mrs. Scott L., 125 Palisades Rd., N. E., Atlanta
Thebaut, Mrs. Ben R., 6800 Peachtree Dunwoody Rd., Atlanta
Thomason, Mrs. W. L., 137 W. Wesley Rd., N. W., Atlanta
Thompson, Mrs. D. O., 275 Collier Rd., N. W., Atlanta
Thompson, Mrs. John W., 204 Fairhaven Circle, N. E., Atlanta
Tidmore, Mrs. T. L., 960 Plymouth Rd., N. E., Atlanta
Trimble, Mrs. W. H., 715 Flat Shoals Ave., S. E., Atlanta
Turk, Mrs. L. N., Jr., 1516 N. Morningside Dr., N. E., Atlanta
Turner, Mrs. Edwin W., 1119 Winburn Dr., East Point
Turner, Mrs. John W., 3985 Vermont Rd., N. E., Atlanta
Upchurch, Mrs. W. E., 2774 Atwood Rd., N. E., Atlanta
Upshaw, Mrs. C. B., 394 W. Wesley Rd., N. E., Atlanta
Van Buren, Mrs. E., 337 Clifton Rd., N. E., Atlanta
Van Dyke, Mrs. A. H., 1926 Greystone Rd., N. W., Atlanta
Veatch, Mrs. J. W., Jr., 325 North Ave., N. E., Atlanta
Vella, Mrs. Paul D., 696 Gladstone Rd., N. E., Atlanta
Wagnon, Mrs. George N., 360 Hascall Rd., N. W., Atlanta
Warner, Mrs. W. P., Jr., 105 Peachtree Memorial Dr., N. W., Atlanta
Warren, Mrs. Wm. C., Jr., 980 Briarcliff Rd., N. E., Atlanta
Weinberg, Mrs. Jas. I., 2356 Montview Dr., N. W., Atlanta
Weinstein, Mrs. A. A., 380 Whitmire Dr., N. W., Atlanta
West, Mrs. Carroll M., 1659 Pelham Rd., N. E., Atlanta
Whipple, Mrs. Robert L., 225 Huntington Rd., N. E., Atlanta
Williams, Mrs. George A., 135 Montgomery Ferry Dr., Atlanta
Willingham, Mrs. T. J., 3781 Tuxedo Rd., Atlanta
Wilson, Mrs. Richard, 1878 Monroe Dr., Atlanta
Wolff, Mrs. Bernard P., 2748 Howell Mill Rd., Atlanta
Wood, Mrs. R. Hugh, 3513 Roswell Rd., N. W., Atlanta
Yampolsky, Mrs. Jos., 746 Brookridge Dr., N. E., Atlanta
Owensby, Mrs. Newdigate M., Georgian Terrace Hotel, Atlanta

## SIXTH DISTRICT

Manager, Mrs. Fred Rawlings, Sandersville

### Baldwin County

President, Mrs. E. W. Allen, Memorial Dr., Milledgeville

### Members

Allen, Mrs. E. W., Allen's Invalid Home, Milledgeville
Allen, Mrs. H. D., Allen's Invalid Home, Milledgeville
Allen, Mrs. T. P., N. Jefferson St., Milledgeville
Anderson, Mrs. S. A., Milledgeville Hospital, Milledgeville
Bailey, Mrs. L. A., Columbia St., Milledgeville
Binion, Mrs. Richard, Green St., Milledgeville
Bostick, Mrs. W. A., Milledgeville State Hospital, Milledgeville
Bradford, Mrs. R. W., Milledgeville State Hospital, Milledgeville
Cary, Mrs. H. R., 210 N. Jefferson St., Milledgeville
Cox, Mrs. C. G., West End, Milledgeville
Clodfelter, Mrs. T. C., Milledgeville State Hosptial, Milledgeville
Chestnutt, Mrs. T. H., State Hospital, Milledgeville
Crichton, Mrs. R. B., State Hospital, Milledgeville
Echols, Mrs. G. L., State Hospital, Milledgeville
Fulghum, Mrs. O. B., 210 Jefferson St., Milledgeville
Garrard, Mrs. J. I., State Hospital, Milledgeville
Longino, Mrs. L. P., Green St., Milledgeville
Peacock, Mrs. T. G., State Hospital, Milledgeville
Richardson, Mrs. C. H., Columbia St., Milledgeville
Smith, Mrs. M. E., State Hospital, Milledgeville
Walker, Mrs. E. Y., Columbia St., Milledgeville
Walker, Mrs. N. P., Green St., Milledgeville
Woods, Mrs. O. C., N. Jefferson St., Milledgeville
Williams, Mrs. D. C., State Hospital, Milledgeville
Wiley, Mrs John D., State Hospital, Milledgeville
Yarbrough, Mrs. Y. H., State Hospital, Milledgeville

### Bibb County

President, Mrs. Chas. J. Woods, 179 North Ave., Macon

### Members

Anderson, Mrs. Carl L., 280 College St., Macon
Anderson, Mrs. J. C., 106 Stanislaus Circle, Macon
Applewhite, Mrs. J. D., 565 College St., Macon
Atkinson, Mrs. Harold C., 101 Buford Pl., Macon
Barton, Mrs. W. L., Waverland Dr., Macon
Bashinski, Mrs. Benjamin, 120 Buford Pl., Macon
Baxley, Mrs. W. W., 219 Buford Pl., Macon
Bazemore, Mrs. Wallace L., 127 Beverly Pl., Macon
Billinghurst, Mrs. George A., 1055 Ingleside Ave., Macon
Boswell, Mrs. W. C., 322 Buford Pl., Macon
Branan, Mrs. Fred H., 1 Jackson Springs Rd., Macon
Brown, Mrs. Roland A., 360 Orange St., Macon
Bush, Mrs. Holloway, 623 Vineville Ave., Macon
Chrisman, Mrs. W. W., 112 Corbin Ave., Macon
Clay, Mrs. J. Emory, 364 Cherokee Ave., Macon

Cooper, Mrs. Charles G., 146 Beverly Pl., Macon
Corn, Mrs. Ernest, 555 College St., Macon
Dove, Mrs. W. B., 135 Bonlevard, N. E., Macon
Dupree, Mrs. George W., Gordon
Dupree, Mrs. John F., Gordon
Edenfield, Mrs. R. W., 224 Riverside Dr., Macon
Fountain, Mrs. James A., 216 Jackson Springs, Macon
Goldstein, Mrs. Jay J., 117 Meadowdale Dr., Warner Robins
Golsan, Mrs. Willard R., 794 Courtland Ave., Macon
Goodman, Mrs. Leon J., Katherine Court, Macon
Goolsby, Mrs. R. Cullen, Jr., 116 Rogers Ave., Macon
Hall, Mrs. John I., 231 High St., Macon
Harrold, Mrs. Charles C., 550 Orange St., Macon
Harrold, Mrs. Thomas, Jr., 567 Orange St., Macon
Hatcher, Mrs. Milford B., 333 Elm Ridge, Macon
Hazlehurst, Mrs. W. D., 770 Vista Circle, Macon
Henderson, Mrs. D. T., Vineville Court, Macon
Hinton, Mrs. Charles C., 2515 Forsyth Rd., Macon
Holmes, Mrs. J. P., 252 Overlook Ave, Macon
Houser, Mrs. Frank M., 108 Corbin Ave., Macon
James, Mrs. L. P., 208 Corbin Ave., Macon
Jarrett, Mrs. W. D., Jr., Twin Pines Dr., Macon
Jones, Mrs. John Paul, Twin Pines Apt., Shirley Hill, Macon
Jordan, Mrs. William K., 203 High St., Macon
Kay, Mrs. J. B., Byron
Keen, Mrs. O. F., 117 Rogers Ave., Macon
King, Mrs. J. L., 223 Buford Pl., Macon
Mass, Mrs. Max, 125 The Prado, Macon
Mays, Mrs. J. R. S., 195 Elizabeth Pl., Macon
McAllister, Mrs. R. W., 922 Ingleside, Macon
McMichael, Mrs. V. H., River Rd., Macon
McMillan, Mrs. E. C., 119 Rogers Ave., Macon
Mobley, Mrs. Walter E., 563 College St., Macon
Nathan, Mrs. Daniel, Ft. Valley
Newman, Mrs. W. A., 571 Orange St., Macon
Newton, Mrs. Ralph G., 650 Ridge Ave., Macon
Patton, Mrs. Sam E., 141 Beverly Pl., Macon
Phillips, Mrs. A. M., 109 Buford Rd., Macon
Porch, Mrs. Leon D., 240 Riverdale, Macon
Prescott, Mrs. E. H., 367 College St., Macon
Rawls, Mrs. Lewis L., 112 Summitt Ave., Macon
Reifler, Mrs. R. M., Lanier Heights, Macon
Richardson, Mrs. Charles H., 359 Cherokee Ave., Macon
Richardson, Mrs. Charles H., Jr., Riverdale Apts., Macon
Richardson, Mrs. Rhea W., 2516 Forysth Rd., Macon
Ridley, Mrs. Charles L., Jr., Fredonia Apts., Macon
Rogers, Mrs. T. E., 120 Clisby Pl., Macon
Ross, Mrs. Thomas L., Jr., 310 Nottingham Dr., Macon
Rozar, Mrs. A. R., Shirley Hills, Macon
Rubin, Mrs. Sam N., Gordon
Rumble, Mrs. Charles T., 219 Albemarle Pl., Macon
Siegel, Mrs. Alvin E., 890 Vista Circle, Macon
Smith, Mrs. Allen, 310 Overlook Ave., Macon
Thompson, Mrs. O. R., 112 Pio Nona Ave., Macon
Tift, Mrs. Henry H., 420 Nottingham Dr., Macon
Vinson, Mrs. Frank, Ft. Valley
Walker, Mrs. D. D., 120 Stanislaus Circle, Macon
Watson, Mrs. Edwin R., 1402 Vineville Ave., Macon
Watson, Mrs. O. O., 553 Orange St., Macon
Weaver, Mrs. Hudnall G., 120 Callaway St., Macon
Williams, Mrs. W. A., 240 Stanislaus Circle, Macon
Woods, Mrs. Charles J., 179 North Ave., Macon
Work, Mrs. Sam, 420 Overlook Dr., Macon
Zachary, Mrs. J. D., Gray

**Washington County**

President, Mrs. J. B. Dillard, Davisboro

**Members**

Dillard, Mrs. J. P., Davisboro
Lever, Mrs. Joe E., Sandersville
Newsom, Mrs. N. J., Sandersville
Newsom, Mrs. Emory G., Sandersville
Oevrby, Mrs. N., Sandersville
Peacock, Mrs. E. S., Sandersville
Helton, Mrs. B. L., Sandersville
Rawlings, Mrs. Wm., Sandersville

## SEVENTH DISTRICT

Manager, Mrs. John MaGahee, Cedartown

**Cobb County**

President, Mrs. Murl Hagood, Marietta

**Members**

Allen, Mrs. George O., 1005 Cherokee St., Marietta
Benson, Mrs. Regina R., 406 Whitlock Ave., Marietta
Benson, Mrs. W. H., 909 Whitlock Ave., Marietta
Benson, Mrs. Earl, 2017 Spring Valley Dr., Marietta
Bailey, Mrs. E. M., Acworth
Burleigh, Mrs. Bruce D., 459 Pine Crest Circle, Marietta
Crawley, Mrs. Walter G., 310 McDonald St., Marietta
Colquitt, Mrs. A. Q., 1011 Whitlock Ave., Marietta
Clark, Mrs. F. B., Austell
Davis, Mrs. E. S., Acworth
Elder, Mrs. C. D., 509 Kennesaw Ave., Marietta
Fowler, Mrs. Herbert, 110 Cherokee St., Marietta
Fowler, Mrs. Ralph, 303 McDonald St., Marietta
Garrett, Mrs. Luke, Sr., Austell
Garrett, Mrs. Luke, Jr., Austell
Hagood, Mrs. F., 710 Church St., Marietta
Hagood, Mrs. Murl, 617 Whitlock Ave., Marietta
Lindley, Mrs. F. P., Powder Springs
Mitchell, Mrs. W. C., Smyrna
McCall, Mrs. Moze A., Acworth
Musarra, Mrs. Elmer, 101 Oakmont Dr., Marietta
Parkinson, Mrs. W. H., 819 Church St., Marietta
Welch, Mrs. L. L., 1011 Church St., Marietta

**Floyd County**

President, Mrs. Emmett H. Brannon, 108 Woodcrest Dr., Rome

**Members**

Battle, Mrs. Lee, 107 Westmore Rd., Rome
Blalock, Mrs. Frank, Battey State Hospital, Rome
Bosworth, Mrs. Ed, 203 Charlton Rd., Rome
Brzozowski, Mrs. Grover, Battey State Hospital, Rome
Cheney, Mrs. Holmes, 412 Holmes Rd., Rome
Connor, Mrs. J. C., Rome Rd., Cave Springs
Crenshaw, Mrs. Fred, Battey State Hospital, Rome
Crow, Mrs. Horace, Battey State Hospital, Rome
Davis, Mrs. Ralph J., 2 Leland Ave., Rome
Dawson, Mrs. Harry, Shannon
Dellinger, Mrs. A. H., 228 Sherwood Rd., Rome
Dellinger, Mrs. Raiden W., Charlton Rd., Rome
Garner, Mrs. J. S., Mimosa Dr., Rome
Garrard, Mrs. J. L., Air Port Rd., Rome
Gilbert, Mrs. Warren, 19 Westmore Rd., Rome
Hackett, Mrs. Walter, 814 East Second Ave., Rome
Harbin, Mrs. Lester, 28 Virginia Dr., Rome
Harbin, Mrs. Robert, 1002 E. Second Ave., Rome
Harbin, Mrs. Thomas S., Cooper Dr., Rome
Harbin, Mrs. William, 24 Virginia Dr., Rome
Jenkins, Mrs. Oliver, Lindale
Johnson, Mrs. Ralph N., 510 E. Ninth St., Rome
Lewis, Mrs. W. H., Cave Springs
McCall, Mrs. J. T., Jr., 31 Notasulga Dr., Rome
McCord, Mrs. M. M., 314 East 11th St., Rome

McCord, Mrs. Ralph, 1002 Collinswood Rd., Rome
Mull, Mrs. J. H., 308 East 11th St., Rome
Norton, Mrs. Robert, 809 Highland Ave., Rome
Payne, Mrs. Rufus, Battey State Hospital, Rome
Sapp, Mrs. C. J., 403 E. 11th St., Rome
Sewell, Mrs. William A., 129 Chatillion Rd., Rome
Smith, Mrs. Inman, 25 Berckman Land, Rome
Williams, Mrs. Norton, Cooper Dr., Rome

**Gordon County**

President, Mrs. W. D. Hall, 306 Willard St., Calhoun

**Members**

Billings, Mrs. Jordan Eli, 308 North Wall, Calhoun
Hall, Mrs. Wilbur Dallas, 306 Willard, Calhoun
Waters, Mrs. Robert Daniel, 334 S. Wall, Calhoun
Richards, Mrs. Roy, Sr., Calhoun
Richards, Mrs. Chas., Calhoun

**Whitfield County**

President, Mrs. Fred Ragland, W. Walnut Ave., Dalton

**Members**

Ault, Mrs. H. Jason, 401 Selvedge St., Dalton
Baldwin, Mrs. Robert, Waugh St., Dalton
Erwin, Mrs. Harlan Lamar, 203 Cleveland St., Dalton
Kerr, Mrs. George S., Chatsworth
Ragland, Mrs. Fred B., W. Walnut Ave., Dalton
Starr, Mrs. Trammell, 201 N. Thornton Ave., Dalton
Venable, Mrs. John, 423 N. Thornton Ave., Dalton
Whitley, Mrs. James R., 400 S. Thornton Ave., Dalton
Wood, Mrs. David Lloyd, 200 W. King St., Dalton

## EIGHTH DISTRICT

Manager, Mrs. Thomas J. Ferrell, St. Mary's Drive, Waycross

**Coffee County**

President, Mrs. Dan A. Jardine, Douglas

**Members**

Clark, Mrs. T. H., Douglas
Goodwin, Mrs. Henry Jr., Douglas
Harper, Mrs. Sage, Douglas
Jardine, Mrs. Dan A., Douglas
Johnson, Mrs. Roy L., Douglas
Joiner, Mrs. Horace, Douglas
Morris, Mrs. J. E., Douglas
Quillian, Mrs. B. O., Douglas
Rickctson, Mrs. Geo. M., Douglas
Wallace, Mrs. J. W., Douglas

**Glynn County**

President, Mrs. Haywood Moore, 113 Crandall St., Brunswick

**Members**

Avera, Mrs. J. B., 715 Richmond St., Brunswick
Brawner, Mrs. Leon, St. Simons Island
Burford, Mrs. R. S., 1017 Egmont St., Brunswick
Coe, Mrs. H. M., 3612 Franklin Ave., Brunswick
Collier, Mrs. T. W., 1117 Palmetto Ave., Brunswick
Christie, Mrs. Ainslie, 1901 F. St., Brunswick
Greer, Mrs. O. B., 1127 Union St., Brunswick
Johnston, Mrs. T. H., 506 Ellis St., Brunswick
Moore, Mrs. Haywood, 113 Crandall, Brunswick
Mitchell, Mrs. L. C., 804 Second Ave., Brunswick
Robben, Mrs. F. J., 822 Union St., Brunswick
Simmons, Mrs. J. W., 924 Union St., Brunswick
Towson, Mrs. I. G., Cottage No. 9, Sea Island
Willis, Mrs. T. V., 1310 Palmetto Ave., Brunswick
Wilson, Mrs. C. A., 500 Albany St., Brunswick

**Ware County**

President, Mrs. W. P. Stoner, A. C. L. Hospital, Waycross

**Members**

Adkins, Mrs. H. T., 514 Sewanee Dr., Waycross
Bradley, Mrs. D. M., 629 Nichols St., Waycross
Bussell, Mrs. B. R., Euclid Ave., Waycross
Calhoun, Mrs. W. C., Satilla Boulevard, Waycross
Collins, Mrs. B. E., 2008 Cherokee Dr., Waycross
Davis, Mrs. F. E., Churchwell Apts., Waycross
DeLoach, Mrs. A. W., 1015 Cherokee Dr., Waycross
Ferrell, Mrs. T. J., St. Mary's Dr., Waycross
Flanagan, Mrs. W. M., 909 Carswell Ave., Waycross
Folks, Mrs. W. M., Cherokee Dr., Waycross
Gay, Mrs. J. R., 504 Ava St., Waycross
Hafford, Mrs. W. C., 229 Riverside Dr., Waycross
Knight, Mrs. A. M., Jr., 110 Thomas St., Waycross
McCullough, Mrs. Kenneth, Satilla Boulevard, Waycross
Minchew, Mrs. B. H., 412 Williams St., Waycross
Muecke, Mrs. H. W., Dean Dr., Blackshear
Oden, Mrs. L. H., Park Ave., Waycross
Penland, Mrs. J. E., 912 Elizabeth St., Waycross
Pierce, Mrs. L. W., 1033 Atlantic Ave., Waycross
Pomeroy, Mrs. W. L., 1421 St. Mary's Dr., Waycross
Reavis, Mrs. W. F., 1105 Satilla Boulevard, Waycross
Seaman, Mrs. H. A., 802 Brunel St., Waycross
Smith, Mrs. Leo, St. Mary's Dr., Waycross
Stamps, Mrs. E. R., 3 Richmond Circle, Waycross
Stoner, Mrs. W. P., 707 Haines Ave., Waycross
Witmer, Mrs. C. A., 501 Gilmore St., Waycross

## NINTH DISTRICT

Manager, Mrs. Robert Jones, Canton

**Barrow County**

President, Mrs. W. Quentin Randolph, Winder

**Members**

Almand, Mrs. C. B., Candler St., Winder
Brookshire, Mrs. Paul, Jr., Wright St., Winder
Elder, Mrs. John Davis, Wright St., Winder
Freeman, Mrs. Ralph, Sr., Hoschton
Harris, Mrs. E. R., Center St., Winder
McDonald, Mrs. E. M., Athens St., Winder
Randolph, Mrs. W. Q., Athens St., Winder
Ross, Mrs. S. T., Candler St., Winder
Russell, Mrs. A. B., Russell Town, Winder

**Cherokee-Pickens Counties**

President, Mrs. Chas. Andrews, Canton

**Members**

Andrews, Mrs. Charles, Canton
Brooke, Mrs. Carter, Canton
Coker, Mrs. G. N., Canton
Hendrix, Mrs. Arthur, Canton
Jones, Mrs. Robert, Canton
Looper, Mrs. Ben, Canton
Pettit, Mrs. J. T., Canton
Roper, Mrs. C. J., Jasper
Roper, Mrs. E. A., Jasper
Scofield, Mrs. I. F., Tate
Vansant, Mrs. T. J., Woodstock

**Gwinnett County**

President, Mrs. W. W. Puett, Norcross

**Members**

Cain, Mrs. Sylvester, Nrocross
Chastain, Mrs. John Robert, Buford
Hutchins, Mrs. Harry, Buford
Hutchins, Mrs. William J., Buford
Kelley, Mrs. D. C., Lawrenceville
Parker, Mrs. Thomas, Duluth
Puett, Mrs. W. W., Norcross
Sims, Mrs. Fayette, Lawrenceville
Smith, Mrs. R., Lawrenceville
Williams, Mrs. A. D., Lawrenceville

**Habersham County**

President, Mrs. J. B. Jackson, Clarkesville

**Members**

Arrendale, Mrs. J. J., Cornelia
Brabson, Mrs. T. H., Cornelia
Garrison, Mrs. D. H., Clarkesville
Harden, Mrs. C. T., Cornelia
Hardman, Mrs. C. T., Tugalo
Holcomb, Mrs. P. F., Clarkesville
Jackson, Mrs. J. B., Clarkesville
Roberts, Mrs. B. J., Cornelia
Walker, Mrs. J. L., Clarkesville

**Stephens County**

President, Mrs. Julian Watters, 107 Henderson Dr., Toccoa

**Members**

Ayers, C. L., Toccoa
Chaffin, Mrs. E. F., 743 E. Tugalo St., Toccoa
Good, Mrs. W. H., Sr., Toccoa Falls

Good, Mrs. W. H., Jr., Toccoa Falls
Henry, Mrs. C. M., 106 Henderson Dr., Toccoa
Isbell, Mrs. J. E. D., 706 E. Tugalo St., Toccoa
Schaefer, Mrs. W. B., 110 E. Whitman St., Toccoa
Shiflet, Mrs. R. E., Big A Rd., Toccoa
Singer, Mrs. A. G., 210 Boulevard, Toccoa
Watters, Mrs. J. Q., 107 Henderson Dr., Toccoa

### TENTH DISTRICT
### Richmond County

President, Mrs. R. C. Major, 1402 Magnolia Dr., Augusta

#### Members

Agee, Mrs. M. P., Cardinal Dr., Augusta
Akerman, Mrs. Joseph, 821 15th St., Augusta
Allen, Mrs. Lane, Mineola, Route No. 5, N. Augusta
Battey, Mrs. W. W., Jr., 2339 Kings Way, Augusta
Battey, Mrs. W. W., 826 Hickman Rd., Augusta
Beard, Mrs. Byron, 1445 Troupe St., Augusta
Bell, Mrs. J. E., 1242 Greene St., Augusta
Bowen, Mrs. J. B., 1538 Schley St., Augusta
Brittingham, Mrs. J. W., Pine Needle Rd., Augusta
Brown, Mrs. Steve, Forest Hills Apt., Augusta
Burpee, Mrs. C. M., 1127 Monte Sano Ave., Augusta
Butler, Mrs. J. R., 1103 Milledge Rd., Augusta
Chaney, Mrs. R. H., Bransford Rd, Augusta
Clarey, Mrs. T. L., 1329 Highland Ave., Augusta
Cranston, Mrs. W. J., 2719 Walton Way, Augusta
Davis, Mrs. Abe, 1302 Wilson, Augusta
DeVaughn, Mrs. N. W., 802 Monte Sano Ave., Augusta
Dick, Mrs. Fred, 2319 Bransford Rd., Augusta
Fulghum, Mrs. T. E., Route 1, Augusta
Fuller, Mrs. W. A., 2749 Walton Way, Augusta
Greenblatt, Mrs. R. B., Bransford Rd., Augusta
Harper, Mrs. H. T., 279 Walton Way, Augusta
Harrison, Mrs. F. N., 1502 Pendleton Rd., Augusta
Haynesworth, Mrs. C. H., 3103 Bransford Rd., Augusta
Hitchcock, Mrs. J. P., 2575 Henry St., Augusta
Hock, Mrs. C. W., Washington Rd., Augusta
Holmes, Mrs. L. P., 2810 Hillcrest Ave., Augusta
Jones, Mrs. G. F., Laurel Lane, Augusta
Kelly, Mrs. G. L., 2131 Gardner St., Augusta
Kennedy, Mrs. T. A., 1021 Hill Top Dr., N. Augusta
Klemann, Mrs. C. L., 1731 Holly Hill Rd., Augusta
Lee, Mrs. Lansing, 901 Heard Ave., Augusta
Leonard, Mrs. R. C., 2903 Lake Forest Dr., Augusta
LeRoy, Mrs. A. G., 2903 Kings Wood Dr., Augusta
Levy, Mrs. J. H. 2509 Henry, Augusta
Major, Mrs. R. C., Magnolia Dr., Forest Hills, Augusta
Massengale, Mrs. L. R., 1116½ Milledge Rd., Augusta
Martin, Mrs. J. M., 1738 Oak Dr., Augusta
Matthews, Mrs. W. E., 2735 Walton Way, Augusta
MaGahee, Mrs. R. C., 2817 Hillcrest Ave., Augusta
McGinty, Mrs. Howard, Lakemont Dr., Augusta
Miller, Mrs. A., 104 Greene St., Augusta
Milligan, Mrs. K. W., 942 Greene St., Augusta
Murphy, Mrs. Eugene, 432 Telfair St., Augusta
New, Mrs. J. S, 402 East Ave., N. Augusta
Palmer, Mrs. J. R., 1329 Glenn Ave., Augusta
Persall, Mrs. J. T., Bransford Rd., Augusta
Perkins, Mrs. H. R., 2130 Wrightsboro Rd., Augusta
Pinson, Mrs. H. D., 1751 Kings Wood Dr., Augusta
Pund, Mrs. Edgar, 1108 Glenn Ave., Augusta
Rhodes, Mrs. R. L., 2501 Bellview Ave., Augusta
Rinker, Mrs. Robert, 2114 Gardner St., Augusta
Risteen, Mrs. W. A., 2618 Henry St., Augusta
Sanderson, Mrs. E. S., 1030 Katherine St., Augusta
Schmidt, Mrs. H. L., Jr., 2504 Helen St., Augusta
Sherman, Mrs. J. S., 2701 Walton Way, Augusta
Sydenstricker, Mrs. V. P., 2251 Cummings Rd., Augusta
Templeton, Mrs. C. M., 1008 Marshall Ave., N. Augusta
Tessier, Mrs. C. E., Buena Vista, Augusta
Thompson, Mrs. Sadie Y., 1303 Monte Sano Ave., Augusta
Thurmond, Mrs. J. W., Route 3, N. Augusta
Todd, Mrs. L. N., Wrightsboro Rd., Augusta
Torpin, Mrs. Richard, 2618 Walton Way, Augusta
Traylor, Mrs. G. A., 2311 Kings Way, Augusta
Travlor, Mrs. J. Bothwell, 924 Hickman Rd., Augusta
Volpitto, Mrs. P. P., Bransford Rd., Augusta
Wilkes, Mrs. W. A., 1546 Schley St., Augusta
Williams, Mrs. V. B., 1415 Johns Rd., Augusta
Williams, Mrs. W. J., 2905 Henry St., Augusta
Willis, C. H., Washington Rd, Augusta
Wright, Mrs. P. B., 3037 Park Ave., Augusta

#### Members-at-Large

Alexander, Mrs. C. H., Forsyth
Bell, Mrs. Rudolph, Thomasville
Gist, Mrs. W. T., Summerville
Jones, Mrs. A. B, Quitman
Thwaite, Mrs. Walter G., Quitman
Wine, Mrs. Mervin, Thomasville

## NEWS ITEMS

Dr. Thomas F. Abercrombie, Atlanta, director-emeritus of the Georgia Department of Public Health, was recently honored for his 30-year leadership of the "watchdog agency" of the State's health. Dr. Abercrombie sat in the seat of honor when the State Board of Health met at Battey State Hospital, Rome, where he was presented with a silver service. The pioneer public health worker was born in Douglasville in 1879. He graduated from the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, Atlanta, in 1903. Until 1909 he practiced medicine in Georgia and South Carolina. In 1910 he joined the staff of the Rockefeller Foundation for the first hookworm survey in Georgia. He was health officer of Brunswick and Glynn County 1913-1917. In July 1917 he was elected state health officer. Quickly he began a campaign against venereal disease, established the divisions of maternal and child health and local health organizations, launched the first antimalarial campaign in Southwest Georgia and took over and repaired the dilapidated tuberculosis sanatorium. Dr. Abercrombie's activities since then have been varied, and he has been honored nationally and internationally. But he is proudest of the State's declining death rate.

* * *

The American College of Surgeons' fracture committees for South Carolina and Georgia recently held a joint conference at the University Hospital, Augusta. Dr. Austin Moore, of Columbia, S. C., and Dr. Peter B. Wright, of Augusta, are chairmen of the committees for South Carolina and Georgia. Dr. H. Earl Conwell, of Birmingham, acted as moderator. Dr. Conwell is associate professor of orthopedic surgery at the Medical College of Alabama and is an outstanding man in the field of orthopedic surgery, Augusta physicians point out. The program consisted of discussions of interesting cases and methods of treatment of bone fractures. Dr. Conwell was guest speaker at a meeting

of the Richmond County Medical Society, and also addressed senior medical students at the University of Georgia School of Medicine, Augusta.

* * *

Dr. John L. Barner, Athens, of the Athens Tumor Clinic, recently addressed the Civitan Club at the Holman Hotel, Athens. Dr. Barner illustrated his lecture with a moving picture on the growth, treatment and prevention of cancer.

* * *

Dr. Wm. B. Bates, Jr., Ludowici, was recently named to a term of four years on the Long County Board of Health. Dr. Bates succeeds Dr. O. D. Middleton, of Ludowici, on the Board of Health.

* * *

The Bibb County Medical Society held its dinner meeting at the S & S Cafeteria, Macon, November 2. Dr. J. R. S. Mays was in charge of the program. Dr. A. M. Phillips, secretary.

* * *

Dr. George A. Billinghurst, Macon, has been named county physician to replace Dr. Thomas A. Hurley, who resigned because of ill health. The announcement was made by the Board of Bibb County Commissioners.

* * *

Dr. Alfred Blalock, a native of Georgia, a graduate of the University of Georgia and the Johns Hopkins University School of Medicine, Baltimore, and who devised the world-famed "blue baby operation" in collaboration with another Johns Hopkins surgeon, was recently named "Baltimore's man of 1948." It was in the fall of 1944 that he and Dr. Helen Taussig first performed the delicate heart surgery after working for months on animals. Since then more than 600 "blue babies" have come from all over the world to undergo the operation. Dr. Blalock also has been honored by the Royal College of Surgeons in London, the American College of Surgeons and Yale University.

* * *

The Chattooga County Medical Society held its monthly meeting at the home of Dr. William U. Hyden, Trion, October 12. Dr. C. H. Barnwell, Chattanooga urologist, was guest speaker. He discussed "Urinary Calculi." Chattooga County has nine physicians, all of whom are members of the county medical society. Congratulations to the Chattooga County Medical Society!

* * *

Dr. W. H. Clark, LaGrange, spoke over Radio Station WLAG concerning the National Blood Program of the American Red Cross. LaGrange citizens were given the opportunity to participate in the program when the mobile unit from Atlanta Blood Center visited LaGrange, October 19.

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Dr. James L. Campbell, Jr., Valdosta physician, was guest speaker at the Dougherty County Medical Society meeting in Albany, October 26. The title of the paper he discussed was "Parathyroid Adenomas and Their Relationship to Kidney Stones."

* * *

Dr. Abe J. Davis, Augusta, Commissioner of Health for Richmond County, and Dr. Everett S. Sanderson, instructor in public health at the University of Georgia School of Medicine, also of Augusta, recently attended a meeting of the National Public Health Organization held in Boston.

* * *

Dr. T. C. Davison and Dr. A. H. Letton, Atlanta, represented the physicians of Georgia at the 13th annual assembly and convocation of the International College of Surgeons, United States chapter, held in St. Louis, November 16. Their paper before the College of Surgeons was an advance report on "Testosterone in Far-Advanced Breast Cancer." The preliminary report dealt with their experiences in treating eight patients. The advanced report dealt with research involving 20 patients at the Sheffield Clinic of the Georgia Baptist Hospital, Atlanta. Drs. Davison's and Letton's work is based on the fact that the breast is a sexual organ, activated every 28 days. The failure of the breast to recover from these irritations, recurring throughout many years of woman's life, may result in cancer of the breast. When surgery and x-ray fail to check this cancerous condition, the Atlanta surgeons employ the x-ray further, to sterilize the patient. They then inject testosterone into the system to counteract the remaining estrogen within the body. "Testosterone does not cure cancer," Drs. Davison and Letton emphasize. "It lets the patient down easy," Dr. Davison said. Their work has been to alleviate suffering, to restore strength, usefulness, and confidence, and to prolong the victim's life, by checking the progress of the disease. They have found their treatment effective in 55 per cent of cases.

* * *

Dr. A. W. DeLoach, well known physician and surgeon in Waycross since 1926, announces the removal of his offces to the corner Remshart and Isabella Streets, Waycross. Dr. DeLoach also announces that Dr. Walter E. Lee, Jr., Waycross, will be associated with him in the practice of medicine and surgery.

* * *

Dr. A. Drew Ferguson, Jr., West Point, recently received an invitation to become a fellow in the American College of Surgeons at the meeting held in Los Angeles, Calif., October 22.

* * *

Georgia is neither the worst nor the best state, when it comes to the number of people who must be served by each active, private physician. The State has 1,613 persons per doctor. Across the country that figure ranges from 582 to 2,420 persons per doctor, with an all U. S. average of 1,082. Medical Economics magazine, in its December issue published November 9, based the figures on the population estimates made by the U. S. Bureau of Census and the magazine's circulation file, which includes all the 135,000 active private physicians in the United States. The states with the most people per doctor are Mississippi, Alabama, Arkansas, New Mexico and South Carolina.

* * *

Dr. Herschel C. Crawford, Atlanta, and Dr. Julian K. Quattlebaum, Savannah, were speakers at the 46th annual convention of the Association of Seaboard Air Line Railway Surgeons in St. Petersburg, November 16-18. Dr. Crawford read a paper on "Management of Traumatic Eyes," and Dr. Quattlebaum's paper was on "Internal Fixation and Early Ambulation in the Treatment of Fractures of the Femur."

* * *

The Georgia Chapter of the American College of Surgeons held its third annual meeting in joint session with the Georgia Urological Association at the Idle Hour Country Club, Macon, November 4, with Dr. Lovick W. Pierce, Waycross, presiding. Dr. Frank Berry, New York, associate clinical professor of surgery at Columbia University College of Physicians and Surgeons, discussed "Healing of Wounds," and read a paper on "Carcinoma of the Lung." Dr. Lloyd G. Lewis, Washington, D. C., professor of urology at Georgetown University School of Medicine, led a discussion on "Testicular Tumors," and read a paper on "Caricinoma of the Bladder." Dr. Olin H. Weaver, Macon, presided during a symposium on fractures. Dr. Peter Wright, Augusta, chairman, Georgia State Fracture Committee of the American College of Surgeons planned the program. The staff of Macon Hospital Cancer Clinic presented a round table discussion on cancer, with Dr. Calvin B. Stewart, Atlanta, presiding. Dr. Braswell E. Collins, Waycross, and Dr. Lester Brown, Atlanta, led a round table discussion on problem cases in ophthalmology, otology and laryngology. Dr. Charles H. Richardson, Macon, served as toastmaster for dinner. Offcers of the Georgia chapter of the American College of Surgeons are: Dr. David

Henry Poer, Atlanta, president; Dr. H. A. Seaman, Waycross, vice-president; Dr. Hugh Lokey, Atlanta, and Dr. J. C. Patterson, Cuthbert, councilors. Officers of the Georgia Urological Association are: Dr. Lovick W. Pierce, Waycross, president; Dr. Harold P. McDonald, Atlanta, president-elect, and Dr. Reese C. Coleman, Atlanta, secretary-treasurer.

* * *

The Cancer Commission of the Medical Association of Georgia presented the following program at the Academy of Medicine, Atlanta, November 18, Dr. Jack C. Norris, Atlanta, chairman of the Cancer Commission of the Medical Association of Georgia, presiding. "An Appreciation of Dr. J. L. Campbell," Dr. Edgar H. Greene, Atlanta, president of the Medical Association of Georgia; "Cancer of the Cervical Stump," Dr. Enoch Callaway, LaGrange, Georgia Division, American Cancer Society and president-elect of the Medical Association of Georgia; "Roentgenologic Diagnostic Problems in Malignancies of the Gastrointestinal Tract," Dr. James J. Clark, Atlanta, member executive committee, Cancer Commission; "Breast Cancer," Dr. Elliott Scarborough, Atlanta, Director Winship Clinic, Emory University Hospital; "Recent Developments in the Diagnosis and Treatment of Cancer," Dr. Charles S. Cameron, New York City, scientific and medical director, American Cancer Society.

* * *

The Georgia Medical Society held its regular meeting in the auditorium of the Warren Candler Nurses Home, Savannah, November 9. Program: Dr. Charlotte Donlan, Paper: "Lymphosarcoma and Hodgkin's Disease." Dr. Stephen J. Lange, secretary.

* * *

The Fifth District Medical Society met at the Academy of Medicine, Atlanta, November 11, with Dr. David Henry Poer, Atlanta, president, presiding. "Remarks", Dr. Edgar H. Greene, Atlanta, president of the Medical Association of Georgia; "Report of Councilor," Dr. Marion C. Pruitt, Atlanta; Officers elected were: Dr. Shelley C. Davis, Atlanta, president; Dr. C. E. Cunningham, Decatur, vice-president; Dr. L. Minor Blackford, Atlanta, secretary-treasurer; Dr. Marion C. Pruitt, Atlanta, councilor; Dr. David Henry Poer, Atlanta, vice-councilor; Dr. W. S. Dorough, Atlanta, representative on Prepayment Medical Care Plan State Committee; Dr. Spencer A. Kirkland and Dr. Glenville Giddings, both of Atlanta, nominees for the State Board of Health; "Sludged Blood and Some of Its Clinical Implications," Dr. Melvin H. Knisely, Charleston, professor of anatomy, Medical College of the State of South Carolina; "Freedom in Medicine," Dr. William Bryant Rawls, New York City, president Medical Society of the County of New York.

* * *

Dr. Eugene B. Elder, St. Augustine, Fla., superintendent and business manager of Flagler Hospital, retired from the hospital field on November 1. On this date Dr. Elder completed 44½ years as a hospital administrator. He has been at Flagler Hospital for the past 4½ years. Dr. Elder has the distinction of being one of the 83 original members present at Buffalo, N. Y., September, 1906, at the meeting of the Association of Hospital Superintendents. The American Hospital Association was organized there. Dr. Elder is a member of the Ware County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association, and a life member of the American Hospital Association and the International Hospital Association. He is also one of the original fellows of the American College of Hospital Administration. Dr. Elder says, although retired from active duty, he expects to continue his best interests in behalf of American hospitals.

* * *

Dr. Edwin C. Evans, Atlanta, announces the opening of his office at 703 Medical Arts Building, Atlanta, for the practice of internal medicine.

* * *

Georgia physicians who were received into fellowship in the American College of Surgeons at the convocation during the Clinical Congress in Los Angeles, October 22, are Drs. Osler A. Abbott, Atlanta; William O. Bedingfield, Savannah; Arthur N. Berry, Columbus; Hugh J. Bickerstaff, Columbus; Robert L. Brown, Atlanta; Robert W. Edenfield, Macon; John S. Fish, Atlanta; Roy L. Gibson, Columbus; James A. Green, Jr., Athens; Thomas S. Harbin, Rome; George Hess, Atlanta; J. Phinizy Hitchcock, Augusta; John C. Ivey, Atlanta; Dan A. Jardine, Douglas; Sterling H. Jernigan, Atlanta; James T. King, Atlanta; Keith C. Rice, Atlanta; Wilford A. Risteen, Augusta; Exum B. Walker, Atlanta, and George W. Wright, Augusta.

* * *

The Georgia Heart Association was organized at the Academy of Medicine, Atlanta, November 5. Sixty-five physicians from throughout Georgia attended the organization meeting. Mr. Frank Wetzel, of New York City, field representative of the American Heart Association, and Dr. Edgar D. Shanks, Atlanta, secretary-treasurer of the Medical Association of Georgia, were present and aided in the organization. The following officers were elected: Dr. Bruce Logue, Atlanta, president; Dr. Thomas L. Ross, Jr., Macon, vice-president; Dr. J. Gordon Barrow, Atlanta, secretary-treasurer; Board of Directors: Dr. H. M. Kandel, Savannah; Dr. Ernest F. Wahl, Thomasville; Dr. Wm. E. Storey, Columbus; Dr. J. W. Chambers, LaGrange; Dr. T. Sterling Claiborne, Atlanta; Dr. Harold C. Atkinson, Macon; Dr. William P. Harbin, Jr., Rome; Dr. Haywood L. Moore, Brunswick; Dr. Hartwell Joiner, Gainesville; Dr. J. B. Neighbors, Jr., Athens, and Dr. Harry T. Harper, Jr., Augusta.

Any physician in the State who is interested in heart diseases is invited to become a member of this organization. If you will send your name to the secretary, Dr. J. Gordon Barrow, 1028 West Peachtree St., N. W., Atlanta, you will be notified of future meetings.

* * *

Dr. B. W. Harris, St. Simons Island, has resumed his practice of medicine at St. Simons Island, after completing post-graduate work in the orthopedic clinic of the University of Tennessee College of Medicine, Memphis.

* * *

Dr. Clair A. Henderson, Savannah, city and county health officer, conferred with Dr. T. F. Sellers, Atlanta, director of the Georgia Department of Public Health, in regard to State assistance for the Savannah Tuberculosis Hospital, and the State Board of Health has approved a proposal for the State to share in the cost of operating the tuberculosis hospital, subject to increased appropriation by the Legislature in January. Savannah spends $67,000 annually operating the hospital and an additional $13,000 supporting TB victims who would not remain at the Battey State Hospital, Rome.

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Dr. Robert E. Huie, Atlanta, announces the removal of his offices to the new East Atlanta Bank Building, Atlanta, for the practice of medicine.

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Dr. E. B. Hutcheson, formerly of Buchanan, celebrated his 91st birthday at the home of his daughter, Mrs. Josh Cody, Union Hill Road, Moorestown, N. J., with whom he now lives. Dr. Hutcheson practiced medicine in Buchanan and Haralson County for 60 years, a great proportion of the time with a horse and buggy. No matter when the call came, night or day, sleet, snow or rain, he went. He served humanity for humanity's sake. After losing his eyesight he went to make his home with is daughter. Congratulations Dr. Hutcheson!

Dr. Charles G. Jordan, Eatonton, announces that Dr. Frederick Eugene Sims, Jr., formerly of Macon, is associated with him in the practice of medicine and surgery at the new hospital, Eatonton.

* * *

The Fulton County Medical Society held its dinner meeting at the Academy of Medicine, Atlanta, December 2. Scientific meeting: Dr. Eustace A. Allen, presiding. "Surgery of Hypertropied Breast," Dr. George W. Fuller, and "Bromide Intoxication, Report of 36 Cases", Dr. John D. Campbell.

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Dr. Steve P. Kenyon, Dawson, was recently named chairman of the section on general practice of medicine of the Southern Medical Association at the Miami meeting.

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Dr. J. Hiram Kite, Atlanta, well known throughout the South for his work with crippled children and a member of the staff of the Scottish Rite Hospital, Atlanta, addressed the Rotary Club of Athens, under the auspices of the Crippled Children's Committee, October 27, at their weekly luncheon. In the evening he talked to the Clarke County Medical Society. Dr. Kite also held an afternoon clinic for crippled children at the Athens General Hospital.

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Dr. A. H. Letton, Atlanta, was recently named an affiliate of the International College of Surgeons, the United States Chapter announced.

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Dr. Harold P. McDonald, Atlanta surgeon, was one of four Americans invited to Mexico to address the Mexico Surgical Congress, in Mexico City. Dr. McDonald delivered his scientific address in Spanish, and was elected an honorary member of the Mexican Urological Association.

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Dr. Frank Mitchell, Sr., formerly on the staff of the Milledgeville State Hospital, Milledegville, announces the opening of his office at Crescent for the practice of medicine.

* * *

Dr. A. M. Phillips, Macon physician, addressed the Macon Civitan Club, paying tribute to the late Dr. Charles C. Harrold, Macon, a charter member of the Kiwanis Club of Macon. In praising the benevolent work of the doctor, Dr. Phillips said that Dr. Harrold's work in establishing a cancer clinic at Macon probably surpasses any other signal thing he did. Dr. Phillips said the clinic is surpassed by no clinic in the State and few in the nation. After the talk the Civitans stood for a minute of silent tribute to Dr. Harrold. The possibility of two memorials in Macon in honor of Dr. Harrold are the Cancer Clinic at Macon Hospital and a city park named for him. The Macon Kiwanis Club would sponsor the memorials honoring Dr. Harrold.

* * *

The Polk County Tuberculosis Association was recently reorganized at the Woman's Club Building, Cedartown, under the sponsorship of the Junior Welfare League. Dr. Rufus Payne, Rome, superintendent of Battey State Hospital, and L. L. Young, Atlanta, executive secretary of the Georgia Tuberculosis Association, were guest speakers.

* * *

Dr. D. F. Mullins, Jr., Athens, was recently appointed professor and acting head of the department of Bacteriology and Veterinary Hygiene, University of Georgia School of Veterinary Medicine, by the Board of Regents of the University System of Georgia. Dr. Mullins is also director of the laboratory and pathologist for St. Mary's and Athens General hospitals, Athens.

* * *

The Richmond County Medical Society held its dinner meeting at Augusta Garden Center, Augusta, October 21. Scientific program: "Healing in Fractures," Dr. H. Earl Conwell, Birmingham, University of Alabama School of Medicine, guest speaker. Dr. David R. Thomas, Augusta, president.

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Dr. C. Purcell Roberts, Atlanta, attended a postgraduate course of the American College of Physicians, "Recent Advances in the Diagnosis and Treatment of Cardiovascular Disease," at the Massachusetts General Hospital, Boston, November 15-24, under the direction of Dr. Paul D. White.

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The Georgia Medical Society held a special meeting at the Candler Nurses' Auditorium, Savannah, November 23. Topic: "Revision of the Constitution and By-Laws of the Georgia Medical Society."

* * *

The Southern Medical Association, at its Miami meeting, October 27, installed Dr. Oscar B. Hunter, Washington, D. C., as president and chose Cincinnati for the 1949 convention. Dr. Hunter succeeds Dr. Lucian A. LeDoux, New Orleans, who became a member of the board of trustees. Other new officers are: Dr. Hamilton W. McKay, Charlotte, N. C., president for 1950; Dr. Curtis Rosser, Dallas, first vice-president; Dr. Donald W. Smith, Miami, second vice-president, and Mr. P. Loranz, Birmingham, secretary-treasurer. First ward for scientific exhibit went to Dr. J. Brown Farrier, Tampa, with Drs. Albert J. Sullivan, Thomas E. McKell and Frederick C. Rehfeldt, New Orleans, second, and Drs. H. Stephens Weens, James V. Warren, David F. James, and Herbert M. Olnick, Atlanta, third.

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The Troup County Medical Society, LaGrange, Dr. Henry W. Grady, LaGrange, president, recently voiced approval of the American Red Cross National Blood Program for LaGrange and Troup County. "At this time," Dr. Grady stated, "the program sponsored by the American Red Cross is the only practicable method that will insure a supply of blood for some patients who require transfusions. It is impossible that an ample amount of the various types of blood be available for the treatment of emergency cases in City-County Hospital. It is essential that the citizens of Troup County support the program by donating blood if the plan is to be successful." Dr. Kenneth D. Grace, LaGrange, president of the Fourth District Medical Society, added his expression of approval to the program. "The National Blood Program of the American Red Cross will provide a blood bank for local use for the first time. The blood bank will eliminate hours of delay in securing the right types of blood and in cases of rare tynes needed and will eliminate delay of days," said Dr. Grace.

* * *

Dr. Perry P. Volpitto, Augusta, professor of anesthesiology of the of the University of Georgia School of Medicine, recently left on the first leg of a medical teaching mission to South America. The mission, which is carried out under the auspices of the Unitarian Service Committee, includes seven prominent United States medical authorities. They will present a series of lectures describing medical practices and developments in the United States. Members of the commission first will visit Bogota, Colombai, and then move on to Medellin in the same South American country.

* * *

The Ware County Medical Society held its meeting at the Woman's Club, Waycross, October 7. Drs. D. M. Bradley and W. C. Hafford were hosts to members of the society. Dr. L. W. Pierce, secretary.

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Waycross was host to physicians and nurses from 22 counties who attended the Regional Cancer Institute, October 13. The morning session of the Cancer Institute was set aside for physicians, featured talks on "Early Diagnosis of Cancer," "Radiation Therapy in the Treatment of Cancer," and "Cancer Research." Speakers included Dr. B. H. Minchew, Waycross Tumor

Clinic; Dr. R. L. Oliver, Savannah Tumor Clinic; and Drs. F. G. Eldridge and A. G. Little, Jr., of the Lowndes County Tumor Clinic. The afternoon session was highlighted with talks by Drs. W. E. Doyle and W. J. Murphy of the Georgia Department of Public Health.

* * *

Dr. Irving S. Wright, New York City, of the New York Postgraduate Hospital, held a series of clinics, seminars, and technical discussions on the cardiovascular system at the Oliver General Hospital, Augusta, Nov. 1-3, according to Col. Charles L. Leedham, chief of medical services. This will be part of the hospital training for professors, residents, interns, and clinical workers. Augusta physicians were invited to attend these meetings.

* * *

The Sixth District Medical Society held its winter meeting at the State Health Department Building, Macon, December 2. Scientific program: "Address of Welcome," Dr. L. D. Porch, Macon; "Use of Anticoagulants in Surgery," Dr. C. H. Richardson, Jr., Macon; "Removal of Foreign Bodies from the Stomach," Dr. J. B. Stewart, Macon; "Local Anesthesia in Fractures," Dr. C. L. Ridley, Jr., Macon; "Treatment of Congestive Heart Failure," Dr. Arthur Merrill, Atlanta, assistant professor of medicine, Emory University School of Medicine; "Official Remarks," Dr. Edgar H. Greene, Atlanta, president of the Medical Association of Georgia. Banquet at Idle Hour Country Club, with Dr. C. H. Richardson, Sr., Macon, toastmaster. "What Doctors Should Know About the Citizens Health Conference," Dr. Enoch Callaway, LaGrange, president-elect of the Medical Association of Georgia. Officers: Dr. Frank Vinson, Fort Valley, president; Dr. J. I. Hall, Macon, vice-president; Dr. A. M. Phillips, Macon, secretary-treasurer; Dr. H. D. Allen, Jr., Milledgeville, councilor; Dr. H. G. Weaver, Macon, vice-councilor, and Dr. A. M. Phillips, Macon, representative on Committee Prepayment Medical Care Plan.

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Dr. Newdigate M. Owensby, Atlanta, was guest speaker at the annual meeting of the Southern Psychiatric Association held at the Hotel Adolphus, Dallas, Texas, December 7. His subject was "Compulsive Drinking." Dr. Owensby is also secretary-treasurer of this association.

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The Southeastern Allergy Association will hold its fourth annual meeting at the Washington-Duke Hotel, Durham, N. C., January 22-23, 1949. Guest speakers will be Dr. George Rockwell, Cincinnati, president of the American College of Allergists, and Dr. Walter Wilkenwerder, Baltimore, president of the American Academy of Allergy. There will be panels on "Infectious Asthmas," led by Dr. Oscar Swineford, Charlottesville, and on "Food Allergies," led by Dr. Hal Davison, Atlanta. Saturday noon there will be an informal luncheon and that night a banquet will be held at the Washington-Duke Hotel. Hotel reservations should be made direct with the hotel. Those planning to attend should notify the secretary, Dr. Katharine B. MacInnis, 1515 Bull St., Columbia, S. C. Dr. Clarence L. Laws, Atlanta, president.

## OBITUARY

*Dr. Alcimus H. Baskin*, aged 79, retired Atlanta physician, died at his residence at Pine Lake, November 17, 1948. Dr. Baskin graduated from Emory University School of Medicine, Atlanta, in 1892. He had practiced medicine in the Atlanta area for 55 years. On his retirement he was honored by a farewell dinner by the Fulton County Medical Society. He was a member of Grace Methodist Church. Dr. Baskin was a former city councilman and had at one time served a term as police commissioner of Atlanta. Survivors are his wife, the former Miss Agnes Muller; two sisters, Mrs. Sam Pierce, Villa Rica, and Mrs. Leola Stevens, Bremen; a brother, Tom Baskin, Villa Rica, and three grandchildren. Funeral services were held at the chapel of Autry & Lowndes, with Dr. Charles L. Allen officiating. Burial was in Hickory Level Cemetery, Villa Rica.

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*Dr. Gamaliel Wyatt Holmes Cheney*, aged 63, Rome, died at his home October 26, 1948. Dr. Cheney was graduated from University of Virginia Department of Medicine, Charlottesville, in 1919. He had practiced medicine in Atlanta and Brunswick before returning to Rome about 10 years ago. He was a member of the Floyd County Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He is survived by his wife, the former Frances Donna Bailey, of Atlanta and Brunswick; a son Holmes Cheney, Jr., and his mother, Mrs. F. A. Nunnally, Rome. Funeral services were held at Daniel Chapel. Burial was in Myrtle Hill Cemetery, Rome.

* * *

*Dr. Charles Russell Hancock*, aged 69, an Atlanta surgeon for 27 years, died November 11, 1948. Dr. Hancock was a native of Charlottesville, Va., and graduated from the Medical College of Ohio, now the University of Cincinnati College of Medicine, Cincinnati, in 1904. At one time he was professor of surgery at the New York Polyclinic Medical School and Hospital, New York. During World War II he practiced medicine in Brunswick and Columbia, S. C. In 1911, Dr. Hancock became nationally known as the first surgeon to use cocaine anesthesia for an appendectomy. He also wrote the first publication on cocaine analgesics. He was a Mason, a member of the U. S. Medical Advisory Board and a fellow of the New York Academy of Medicine. He was also a member of the Fulton County Medical Society and Phi Rho Sigma medical fraternity. Survivors are his wife; a son, George B. Hancock; two sisters, Mrs. Jane H. Garth, Charlottesville, Va., and Mrs. T. O. J. Poitevent, Ocean Springs, Miss., and a brother, A. B. Hancock, Paris, Ky. Funeral services were held at Spring Hill, Atlanta, with the Rev. Henry H. Righton officiating. Burial was in the private family cemetery, "Ellerslie Estate", Charlottesville, Va.

* * *

*Dr. William H. Hendricks*, aged 75, beloved pioneer Tifton physician, was killed in a traffic accident near Tifton November 15, 1948. Dr. Hendricks was returning from Enigma, where he had been to see a patient. He graduated from the St. Louis College of Physicians and Surgeons, St. Louis, in 1897. During World War I, Dr. Hendricks served in the Army with the rank of captain. He had served Tifton as mayor and Tift County as both senator and representative. He was a member of the Tift County Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. Survivors are three daughters, Mrs. T. N. Ricks, Mount Olive, N. C.; Mrs. Louis H. Stamps, Tifton, and Mrs. A. Horton Ellis, Rossville, and four brothers. Funeral services were held at the First Baptist Church, Tifton, with the Rev. Davis M. Sanders, pastor, officiating, assisted by the Rev. John E. Wilson and the Rev. L. B. Allen. Burial was in Tifton Cemetery, Tifton.

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*Dr. A. Roy Hogg*, aged 67, Lexington, died November 23, 1948. A native of Senoia, Dr. Hogg graduated from University of Georgia School of Medicine, Augusta, in 1905. He practiced in Atlanta and Luthersville before going to Lexington about 10 years ago. He was a Mason and a member of the Methodist church. He is survived by two daughters, Mrs. James S. Garvin and Mrs. Ed Richardson, Jr., both of Atlanta; a son A. Roy Hogg, Jr., Atlanta; two sisters, a brother and two grandchildren. Funeral services were held at Spring Hill, Atlanta, with Dr. Lester Rumble officiating. Burial was in Senoia Cemetery, Senoia.

*Dr. John Henry Kelley*, aged 85, retired Atlanta physician, died at his home November 20, 1948. A native of DeKalb County, Dr. Kelley had lived most of his life in Atlanta. He graduated from the Atlanta College of Physicians and Surgeons, Atlanta, in 1905. He practiced medicine for many years in Decatur and the Atlanta area before his retirement. He was a Mason and a member of the Moreland Avenue Church of Christ. Surviving are his wife, and several nieces and nephews. Funeral were held in the Moreland Avenue Church of Christ, with the Rev. W. D. McPherson and the Rev. Bertram King officiating. Burial was in East View Cemetery, Atlanta.

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*Dr. John Fletcher Lunsford*, aged 70, Preston, widely known and highly esteemed physician, died October 22, 1948. Dr. Lunsford was born in Webster County, the son of the late James S. and Mary Fletcher Lunsford. He graduated from the University of Georgia School of Medicine, Augusta, in 1901. He had practiced medicine in Preston and Webster County for 47 years, and for a number of years was the only physician in Webster County. He was a member and senior deacon of the Preston Baptist Church, a member of the Webster County Board of Education and of the local school board. He was a city councilman, a Mason and a Shriner He served other public offices and was prominently associated with the civic, religious and professional activities in his realm. He was a member of the Randolph-Terrell Counties Medical Society, the Medical Association of Georgia, and was a fellow of the American Medical Association. He was familiarly known, far and wide, as "Dr. John" and was recognized by his fellowmen with a keen sense of appreciation and devotion for his worthy citizenship. Survivors include his wife, the former Miss Annie Laura Stapleton; one son, J. S. Lunsford, Clarkesville; a daughter, Mrs. George B. Holley, Americus; two brothers, Dr. Guy G. Lunsford, Atlanta, and Judge Julius R. Lunsford, Reynolds, and three grandchildren. Funeral services were held at the Preston Baptist Church, with the Rev. J. E. Hall, pastor, officiating. He was assisted by the Rev. J. A. Ivey and the Rev. Wallace Cheek, both of Americus. Burial was in Preston Cemetery, Preston.

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*Dr. Hiram Alonzo Alderman*, aged 71, widely known Bulloch County physician, was killed almost instantly when the car he was driving collided with another three miles northwest of Statesboro, August 14, 1948. Dr. Alderman was born in Florida, but had lived in Portal all of his adult life. He graduated from the Atlanta School of Medicine, now Emory University School of Medicine, Atlanta, in 1910. Dr. Alderman was a member of the Bulloch-Candler-Evans Medical Society and the Medical Association of Georgia, and was a fellow of the American Medical Association. He was active in the practice of medicine and was returning to Portal after an early morning visit to Statesboro when the accident occurred. He is survived by his wife, three sons, Lonnie Alderman, of Springfield; Earl Alderman and Mike Alderman, both of Portal; three daughters, Miss Maxie Lou Alderman, of Portal; Mrs. Barney Dunlap, of Atlanta, and Mrs. J. E. Feaster, of Newport, R. I.; two brothers and three grandchildren. Funeral services were held at the Upper Mill Creek Baptist Church, with the Rev. J. B. Jarrell officiating, assisted by the Rev. J. E. C. Tillman. Burial was in the Upper Mill Creek Cemetery, Portal.

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*Dr. Corben Jay Decker*, aged 87, prominent retired Athens physician and surgeon, died June 21, 1948. Dr. Decker was graduated from Jefferson Medical College, of Philadelphia, in 1880. He had practiced medicine in Athens for some ten years after being retired from the United States Navy with the rank of Lieutenant Commander. Dr. Decker had been a member of the Clarke County Medical Society and the Medical Association of Georgia, and was a fellow of the American Medical Association. Dr. Decker resided in Milledge Avenue, Athens, and is survived by his wife, Mrs. Katherine Mason Decker; two daughters, Mrs. David Parish, of Athens, and Mrs. Ashby Wallace, of Wayne, Pa.; six grandchildren and three great-grandchildren. Graveside services were held at Arlington National Cemetery with the Rev. David Cody Wright, Episcopal rector officiating. Burial was in Arlington National Cemetery, Washington, D. C.

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*Dr. James Charles Gower*, aged 72, widely known practicing physician of Gainesville, died September 2, 1948. Dr. Gower was a native and lifelong resident of Hall County and Gainesville, where he had practiced medicine for over 40 years. His father, the late Dr. J. C. Gower, also practiced medicine in Gainesville for half a century, being a pioneer resident. He was a member of the Hall County Medical Society and the Medical Association of Georgia, and was a fellow of the American Medical Association. He was a member of the Methodist Church. Surviving are his wife, Mrs. Sarah Henderson Gower, of Gainesville; a brother, E. N. Gower, of Jackson, Miss., and a sister, Mrs. Ed Dale, of Lavonia. Funeral services were held at the chapel of Hubert Vickers, with the Rev. Franklin Owen officiating. Burial was in Alta Vista Cemetery, Gainesville.

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*Dr. Charles Cotton Harrold*, aged 70, widely known Macon physician and civic leader, died in a Macon hospital following a series of heart attacks October 11, 1948. Dr. Harrold was born in Americus and graduated from Columbia University College of Physicians and Surgeons, New York City, in 1902. He was an active member of the Kiwanis Club and a member of Christ Episcopal Church. He was a member of the Bibb County Medical Society, the Sixth District Medical Society, the Medical Association of Georgia, and a fellow of the American Medical Association. Survivors include his wife, Mrs. Helen Shaw Harrold; one daughter, Mrs. Sinclair Frederick, Ft. Valley; a son, Dr. C. C. Harrold, Jr., New York City; four grandchildren; one brother, Frank P. Harrold, Americus; and two sisters, Miss Elizabeth Harrold, of Macon, and Mrs. S. S. Shipps, of Savannah. Funeral services were held at the Christ Episcopal Church, Macon, with the Rev. Raymond E. Fuessle officiating. Burial was in Riverside Cemetery, Macon. From the *editorial pages of The Macon Telegraph*, October 13, we quote:

"On the grave of Oliver Goldsmith, is the inscription, 'He touched nothing that he did not adorn.'

"Dr. Charles Cotton Harrold greatly adorned his profession as a physician and surgeon which he practiced, first of all, with an eye to the betterment of humanity.

"But he touched life at many angles and was interested in many things. It is at least safe to say that no citizen in Macon ever gave more to his community in so many different ways, than did Dr. Harrold.

"He took up a practice in Macon in 1904 and remained a loyal citizen throughout the adult years of his three score and ten. He entered the First World War as a major in the medical corps but asked that he be demoted to captain in order that he might go to France where he served with the Presbyterian Hospital Unit.

"His early association with France must have been, in part, the inspiration for one of the latest of his activities which was to send food, clothing and other necessities to the destitute inhabitants of the bombed out areas of Normandy.

"In between those years, he was identified with many cultural and welfare undertakings. In addition to giving his own professional service to cancer victims who could not afford to pay, he was constantly seeking contributions to meet the incidental expenses of these

unfortunates. There are indeed hundreds of them who should bless his memory.

"Dr. Harrold was an authority on archaeology and the early history of the Indians. He was an important factor in bringing about the development of Ocmulgee National Monument.

"He was a friend to the Boy Scouts and the Girl Scouts and was largely instrumental in the purchase of Camp Martha Johnson for the girls' organization. He was a lover of nature in all its forms. He had a vast range of knowledge of the trees, shrubs, and flowers and was tireless in his efforts to beautify the city of Macon. The memorial planting of magnolias on Coleman Hill to perpetuate the memory of those who died in the second World War furnishes an abiding illustration as well as a monument to Dr. Harrold himself.

"Vigorous in intellect, warm in his love of humanity, kindly in all the relations of life, he was a man of whom the city of Macon may well be proud, and will long remember. We shall not look upon his life again."

* * *

*Dr. Henry Jones Carswell*, aged 63, prominent Waycross physician and civic leader, died of a heart attack while changing a tire on his automobile near Washington October 3, 1948. He was born in Burke County, Georgia, near Hephzibah, the son of the late Rev. W. Hamilton Carswell, a Baptist minister, and Fannie Jones Carswell. Dr. Carswell was a member of a distinguished Georgia family, outstanding for generations in the field of medicine and the ministry, and the Ware County history records the prominent part the Carswells had in civic growth and cultural development of Ware County and South Georgia. He graduated from the University of Georgia School of Medicine, Augusta, in 1908. He was a veteran of World War I, having served overseas as an officer. He was commander of the Post No. 10 of the Waycross American Legion, on two occasions. He served as president of the American Legionnaires, Inc., and his efforts were largely responsible for securing the American Legion Home in Waycross. He was responsible for the erection of the Memorial Bridge across the Satilla River on the Waycross-Blackshear highway, as a memorial to veterans of World War I. He was a member of the Ware County Medical Society, and had served as president of the society, the Medical Association of Georgia, a fellow of the American Medical Association, and a fellow of the American College of Surgeons. He was a member of the First Baptist Church. Survivors are his wife, Mrs. Marian Carswell; one son, Henry J. Carswell, Jr., of Athens; two daughters, Mrs. Robert L. Bates, Tuscaloosa, Ala., and Mrs. Roy C. Marple, Asheville, N. C.; several grandchildren, three brothers and one sister. Funeral services were held at the American Legion Home, Waycross, with the Rev. Walter L. Moore officiating. Burial was in Oakland Cemetery, Waycross.

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*Dr. Julius Thomas Pitts*, aged 76, prominent retired minister and physician of Newborn, died September 21, 1948. Dr. Pitts graduated from Emory University School of Medicine, Atlanta, in 1895. He was a member of the Newton County Medical Society, and the Medical Association of Georgia, and a fellow of the American Medical Association. He was a member of the First Methodist Church, and for a number of years he preached and taught Sunday School at Pitts Chapel. Survivors include his wife, Mrs. Mary Gay Pitts, Newborn; three sons, J. E. Pitts, Johnson City, Tenn.; W. Gay Pitts, Indian Springs, and Garnett H. Pitts, Wenatchee, Wash.; a brother, J. W. Pitts, Newborn, and three grandchildren. Funeral services were held at the First Methodist Church, Newborn, with the Rev. H. B. Landrum officiating. Burial was in the Newborn City Cemetery, Newborn.

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*Dr. Leonard Lee Welch*, aged 53, prominent Marietta physician, died of a heart attack October 19, 1948. Dr. Welch graduated from University of Pennsylvania School of Medicine, Philadelphia, in 1921. He interned at St. Joseph's Infirmary, Atlanta. He was a member of the Cobb County Medical Society and Medical Association of Georgia, and was a fellow of the American Medical Association. Dr. Welch was a stockholder in the Marietta Hospital for 25 years. He was an active member of the First Methodist Church, Marietta, and for two years was a member of the Cobb County Board of Health. Survivors are his wife; three daughters, Misses Clara, Merrilyn and Mary Emma Welch, and two brothers, Dr. Carl Welch, of Attapulgus, and Dr. E. B. Welch, of Pritchard, Alabama. Funeral services were held at Mayes-Ward Chapel, with the Rev. Jesse Veatch and the Rev. John B. Tate officiating. Burial was in Mountain View Cemetery, Marietta. Members of the Cobb County Medical Society served as honorary escort.

## SOUNDS PLEA FOR MORE YOUNG MEN IN FIELD OF RADIOLOGY

More young men "who are willing to scorn delights and live laborious lives" are needed in the x-ray field, according to Dr. Lawrence Reynolds, of Detroit, newly-elected president of the American Roentgen Ray Society.

"The profession," he says, "needs the superior, worthwhile men in medicine who have the vision to see the great future that lies ahead in radiology and its allied sciences."

Dr. Reynolds, who is chief of the department of radiology, Harper Hospital, Detroit, was elected president at the 49th annual meeting of the Society in Chicago, September 14-17.

In an editorial in the current issue of the *American Journal of Roentgenology and Radium Therapy*, he says that the "whole history of radiology from its incipiency to the present time is one of steady development. Perhaps no single episode which has resulted from a scientific endeavor has so greatly influenced the progress of the human race as the discovery of the roentgen ray and radium, and there is no branch of medicine which has not benefited by their employment."

Continuing, Dr. Reynolds' article says:

"Cannot radiology boast that it spawned other exciting and important professions—aviation, chemistry, radiotherapy, radiochemistry, atomic radiology, and structural atomic radiation engineering?

"The products of atomic fission are being used to discover how the human body converts food into fat, flesh, and energy, and how it repairs injuries and how radioactive isotopes seek out specific tissues and flood them with rays which in some cases have extraordinary healing power, and the biologists are using them in other scientific efforts to catch the green leaf in the very act of making starch, sugar, and cellulose with the aid of the sun. By the use of the products of atomic fission great progress is being made in illuminating some of the darker regions of physiology and chemistry.

"Radioisotopes today in their relation to general medicine are very much in the same position as radiology was fifty years ago. It began as a tool of the physicist and by gradual expansion in its medical application it became a department within itself. Is it not logical that radiant energy should also fall within the specialty of radiology?

"Since the government has made available in unlimited quantities radioisotopes, both for research and treatment, there is opened up a wide field of investigation."

Dr. Reynolds urged members of the American Roentgen Ray Society "to see that such grants and aids are utilized to the greatest advantage."

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The Medical Association of Georgia will meet in Savannah May 10-13, 1949. Have you made your hotel reservations in Savannah?

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The United States Treasury Department, Savings Bond Division, has again called on the members of our Association to remind us of the continuing program for the sale of United States Savings Bonds.

This Christmas let's all give the finest gift of all . . . U. S. Savings Bonds.

The Medical Association of Georgia will celebrate its 100th birthday in 1949. Do not miss this important meeting at the Hotel DeSoto, Savannah, May 10-13, 1949. And do not forget to make your hotel reservations now.

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